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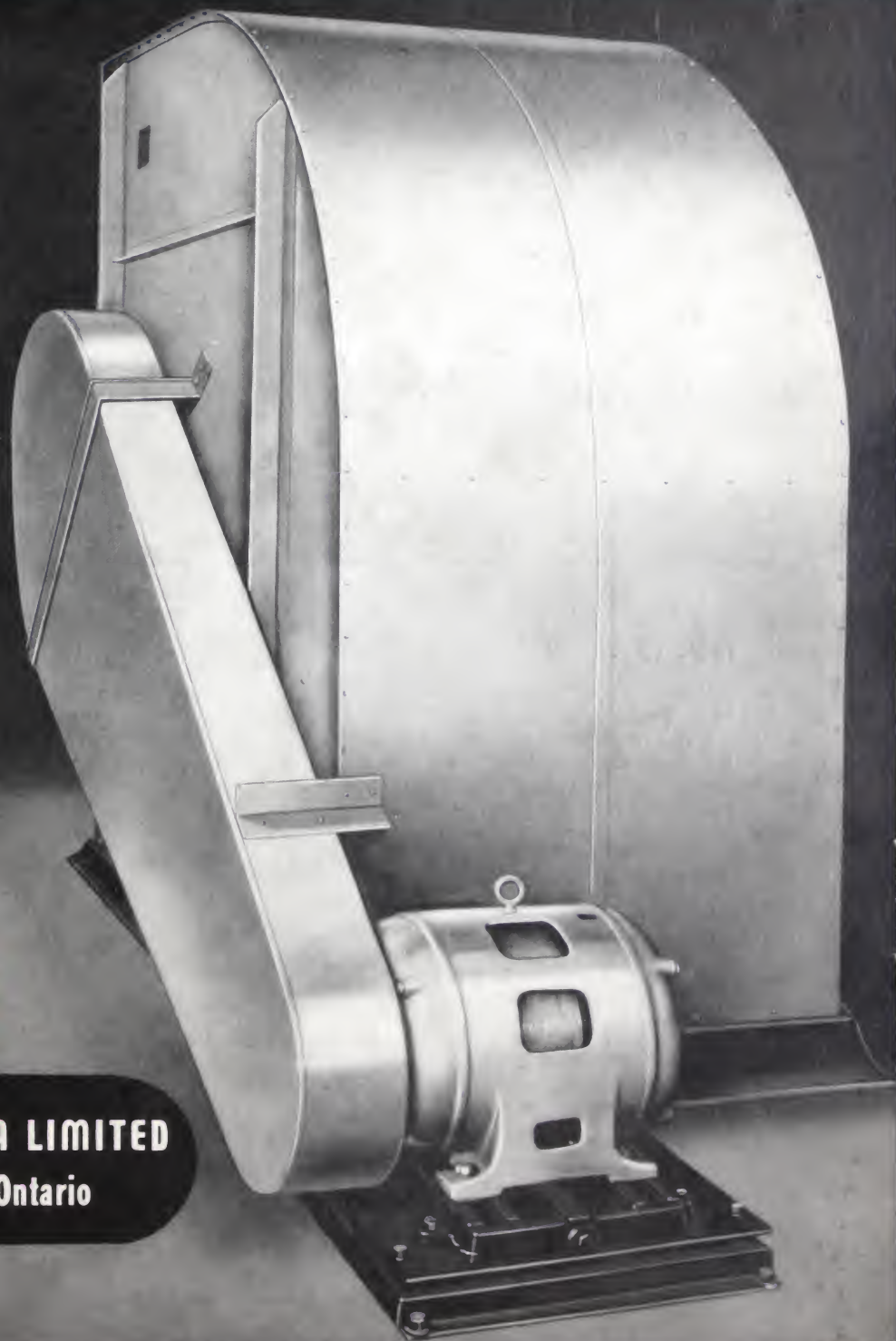
TRANE

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CENTRIFUGAL FANS



TRANE COMPANY OF CANADA LIMITED
4 Mowat Avenue, Toronto, Ontario



TRANE FANS



NO. 8 THRU NO. 30

The Trane Company of Canada, Limited, manufactures a complete line of fans for heating, ventilating, air conditioning and air handling applications.

The fan illustrated on the left shows the lockseam construction typical of units with wheels of 30" or less.

The fans, numbering 8 thru 30 may have Single Width Wheels with Single Inlets or Double Width Wheels with Double Inlets.

This unit has Drive Arrangement 2—a belt drive arrangement used only on smaller size single inlet fans.

Top Horizontal Discharge is illustrated but on all fans of this size the direction of discharge can easily be converted.



Small FC

FIGURE 1

NO. 15 THRU NO. 30

Trane Company of Canada, Limited, is one of the few fan manufacturers who make both Forward Curved (Type FC) and Backwardly Inclined (BI) Fans. While in some cases it may be possible to use either type of fan, each has definite operating characteristics which particularly recommend it for certain types of installations.

In sizes ranging from 15 thru 30 BI Fans are constructed with a lockseam housing that makes the unit air tight.

Drive Arrangement 3, the most popular for all belt driven fans, is used on the fan illustrated here. Direction of discharge is vertically up—designated as "Up-Blast" by the National Association of Fan Manufacturers. Direction of discharge is easily converted to any standard discharge.

Small BI

FIGURE 2





TRANE FANS

NO. 33 THRU NO. 60

Forward Curved Fans of the construction shown here are available with wheel diameters ranging from 33-60 inches in single or double width. The low tip speeds which characterize FC wheels make these units particularly desirable for installations where extremely quiet operation is necessary.

The housing design shown here provides a complete girder of steel angles. To this sturdy frame the sheet steel housing is securely bolted. Sides and scroll continue to the floor to form a durable box-like housing.

Fans of this size are built to serve a specific installation and cannot be converted. The direction of discharge on unit shown is Bottom Horizontal. Drive Arrangement 3.

Medium FC

FIGURE 3



NO. 33 THRU NO. 60

All fans in the Trane line are the products of Trane design and engineering skill. Their trim, neat appearance and quality workmanship reflect the vast experience of Trane craftsmen. Only the finest materials are used in their fabrication.

With these propositions definitely established the final over-all results—outstanding value and exceptional service—are only logical.

The unit illustrated is a Backwardly Inclined Single Width, Single Inlet Fan with Drive Arrangement 3. Down Blast Discharge.

Housing construction shown is typical of all BI Fans with wheel diameters 33 thru 60 inches. Sheet steel sides and scroll are bolted to a framework of steel angles which not only strengthens the unit but also provides a continuous metal-to-metal air seal around the entire housing.

Medium BI

FIGURE 4

TRANE FANS



NO. 66

To satisfy demands for large ventilating and air conditioning applications Trane has included a fan having a wheel diameter of 66 inches as a standard size, in both single and double wheel widths.

The fan to the left indicates the construction used on this large fan. Housing is built in two separate sections each of which can be handled as an individual unit. The same bolted seam construction that is used on medium sized units permits complete disassembly of this large fan.

The unit shown has Forward Curved Double Width Wheels. Top Angular Discharge. Drive Arrangement 3.

Large FC

FIGURE 5

NO. 66

All Trane Fans are built to comply with standards set by N.A.F.M., the National Association of Fan Manufacturers, and are available in all standard arrangements and directions of discharge. They are tested and rated in accordance with N.A.F.M. codes. Each fan wheel is carefully balanced before assembly. Each fan test-run before shipment.

The fan illustrated on the right is a Single Width Backwardly Inclined Fan. Housing is split into an upper and lower section, with bolt-seam fabrication throughout. Bottom Horizontal Discharge is illustrated. Drive Arrangement 3.

Large BI

FIGURE 6



Figures 7 and 8 show large BI Fan with split housing which simplifies handling.

FAN FEATURES



FIGURE 7

All Trane Fans may be divided into two general groups according to construction features.

1. Centrifugal Fans—small—
Sizes 8 to 30.
2. Centrifugal Fans—large—
Sizes 33 to 66.

Size numbers on Centrifugal Fans indicate their wheel diameters expressed in the nearest inch.

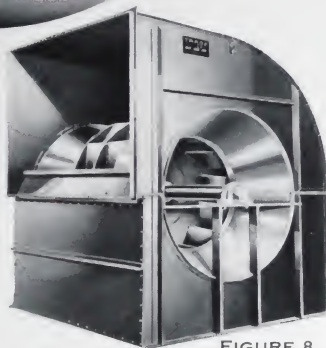


FIGURE 8

SMALL FANS

Fans numbering 8 thru 30 are available in the following types and sizes.

Forward Curved Fan Wheels. Single Width and Double Width with wheel diameters of: 8", 12", 15", 18", 21", 24", 27" and 30".

Backwardly Inclined Fan Wheels. Single and Double Width with wheel diameters of: 15", 18", 21", 24", 27", and 30".

Since the Trane Company of Canada, Limited, manufactures both Forward Curved and Backwardly Inclined Fans in an extremely wide range of sizes it is possible to select regular item fans that are in effect "tailor-made" to satisfy a particular application.

Lockseam construction... an exclusive Trane fabrication process... is utilized on all fans having a wheel diameter of 30" or less.

The seam, illustrated in Figure 9, is achieved by inserting the fan housing sides into a deep, narrow U formed along the edges of the fan scroll and rigidly crimping scroll to side sheets. The tight metal-to-metal joint thus formed is responsible for the outstanding advantages of fans in this size range.

1. AIR TIGHT HOUSING.
2. ATTRACTIVE APPEARANCE.
3. UNUSUAL STURDINESS.

The lockseam construction is typical of many fabrication extras, provided at no premium in price, that make the Trane Fans outstanding in value.

All fans, regardless of size, are shipped from the factory with the direction of discharge set to conform to requirements of specified applications. However, it is often necessary to alter the discharge direction of smaller fans. This can be done on every fan having a wheel diameter of 30" or less simply by removing the bolts from the inlet ring, turning the housing to desired direction and reassembling. See Figure 12. Making the change takes but a few minutes simplifying selection and installation of these units.

Fans with wheel diameters of 21" or less may be set to discharge at increments of 45° from the Top Horizontal position. When wheel diameters are 24", 27", or 30" increments are 22½°.

WHEEL CONSTRUCTION

The fan wheels on these smaller size units are individually checked for weight distribution and alignment with the same exact care used on larger units. Wheel rims are steel with blade openings die cut so that each blade is set at an identical angle to the rim.

On Forward Curved Wheels with diameter of 8" 48 narrow curved blades are used while on the larger sizes 64 blades are set into the stamped wheel. Tie rods strengthen wheels 24" and larger.

Backwardly Inclined Wheels are carefully fitted with 12 blades, slanting backwards to the direction of discharge, held securely in place by a special formed rim.

Cast iron hubs are used on even the smallest units since they provide greater strength, durability and wheel rigidity.



FIGURE 9
Lockseam Housing

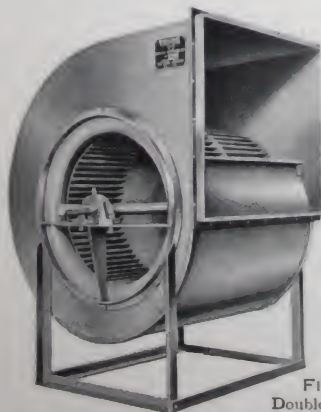


FIGURE 10
Double Width FC Fan
size 30 and smaller.

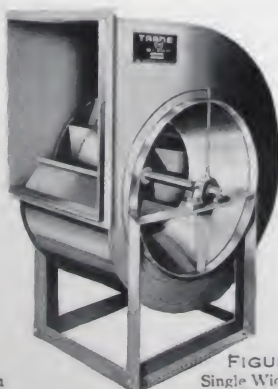


FIGURE 11
Single Width BI Fan
size 30 and smaller.

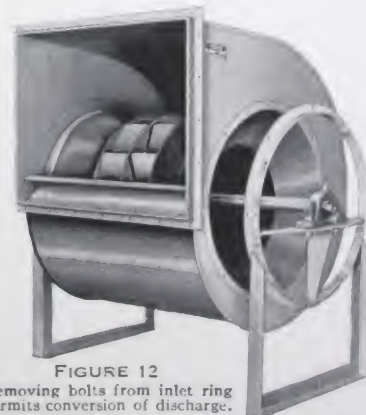


FIGURE 12
Removing bolts from inlet ring
permits conversion of discharge.

LARGE FANS,



FIGURE 13
No. 48 Up-Blow Fan,
Drive Arrangement L.

Trane Centrifugal Fans numbering 33 thru 66 are designed for the larger comfort heating, ventilating and air conditioning jobs as well as industrial and process drying and air conditioning. All sizes in this group can be obtained with either FC or BI Wheels of single or double width. Capacities extend to 175,600 CFM.

BOLT SEAM CONSTRUCTION

These fans are constructed with apron and side sheets carried to the floor forming a durable, box-like housing. Extra-wide base angles provide a solid anchorage.

Sides and scroll are bolted to a frame of steel angles. Throughout the entire housing, wherever two steel sheets are in junction this angular steel forms the joint to which the steel side sheets and apron are bolted. This not only strengthens and reinforces the entire housing but also provides a metal seam that prevents air leakage.

In addition, the bolted seam construction permits these fans to be completely disassembled. All the fans in this group have been designed so that this can be accomplished with the utmost ease and rapidity. Especially desirable for on-the-job handling and inspection, this design feature is also of major importance in facilitating shipment for export or wherever shipping space is a major consideration.

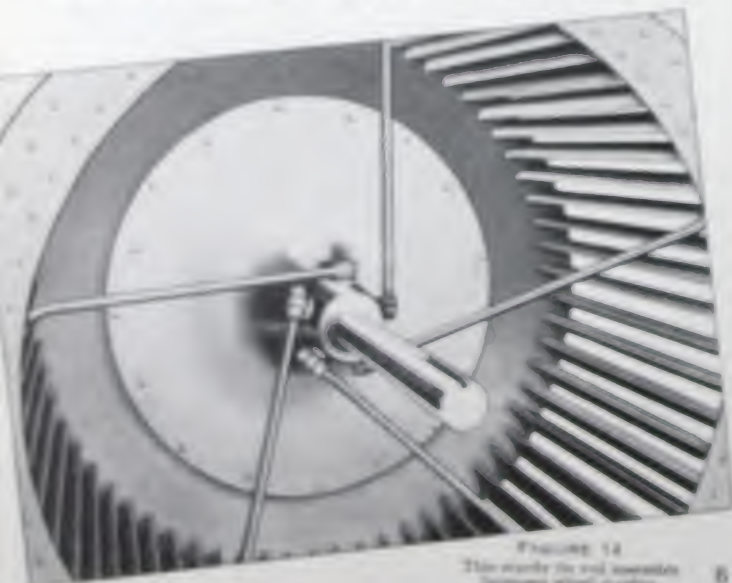


FIGURE 14
This nearly 60 inch diameter
downward wheel capacity.

Figures 15 and 15A show one of these units in two stages of disassembly.

In addition to the boltseam construction used on all fans in this range, the largest—66 is characterized by a split housing. Built in two separate sections, the upper part of the housing can be removed from the lower and handled as an individual unit as shown in Figures 7 and 8 further simplifying shipment, installation and inspection.

DISCHARGE SET

Fans of this size are built specifically to conform to the requirements of certain applications. Since this is true the direction of discharge is set at the factory. *It cannot be altered after assembly.* All of these fans may be obtained in any of the standard drive arrangements and directions of discharge as shown on page 47.

Fans 33' to 66' in diameter with Forward Curved Wheels have 64 die formed blades securely riveted to rims and back plates which are die cut so that the individual blades are all set at exactly the same angle. The entire wheel housing is supported by tie rods between wheel rim and hub, increasing wheel rigidity. Figure 14 shows a close-up of tie rod construction.

Backwardly Inclined Wheels have a special formed rim to which are welded 12 large blades which slant backwards to the direction of discharge.

Each wheel is thoroughly checked for alignment and weight distribution before assembly.

The streamlined inlet is designed to admit maximum amount of air to fan interior with a minimum of resistance and back current. Back plate and hub are aerodynamically correct for diverting direction of air without setting up crosseddies.



FIGURE 15



FIGURE 15A

BEARINGS



FIGURE 16

FIGURE 17

FIGURE 18

FIGURE 19

BALL BEARINGS

Precision ball bearings of the self-aligning grease packed pillow block type are standard equipment on Trane Centrifugal Fans. These bearings are pre-lubricated and feature a permanent centrifugal labyrinth seal which keeps out dirt and retains lubricant.

The high carbon electric furnace steel used on the balls and bearing races is of the highest quality. It is subjected to rigorous metallurgical testing and examination before being machined into the bearing parts. After machining, the parts are hardened in a steel treating plant. Long life and trouble-free operation result.

The design features of the bearing itself are the result of vast engineering experience in the field of load carrying.

1. The bearing assembly has deep grooved ball paths.
2. The race contour corresponds to ball contour to the greatest extent consistent with good bearing design.
3. The balls are fitted into their raceway paths with no axial play.
4. The balls are of maximum size and number allowable with annular type ball bearings.

5. The ball retainer maintains its rotating position without riding the contour of the balls.

6. The ball pocket walls are perpendicular to seal in lubricant.

These features contribute to increased load capacity and bearing life, reduce wear to a minimum and assure maximum operating efficiency.

Bearings are pre-lubricated with a light viscosity, low torque grease that has a high temperature—above 250°—melting point and a low cold test of -30°. It will withstand speeds far in excess of those ordinarily encountered in fan operation.

To assure efficient fan operation, periodic relubrication of all fan bearings should be a regular item on the maintenance schedule. Fan speed and atmospheric temperature and condition are factors determining the desired frequency of relubrication. Bearings should be lubricated when the fans are in operation. Only a small amount of grease is needed since the sealed bearing chambers should be filled to only $\frac{1}{3}$ of their capacity.

Alemite hydraulic fittings are furnished as standard. The patented locking pin feature not only provides for bearing lubrication but also prevents rotation of the bearing outer race ring and resulting wear in the housing. In addition it permits several degrees of fan shaft misalignment in any direction. Each end of the locking pin has a V groove to permit free passage of grease into the sealed chamber.

Precision type pillow blocks of the style illustrated in Figure 16 are used on all fans with Drive Arrangements 1, 3, 5, 6, 7, and 8. On Drive

Arrangement 2 Fans, precision type pillow blocks of the style illustrated in Figure 23 are ordinarily used. This bearing consists essentially of two bearings similar to that illustrated in Figure 17 which are incorporated into a single housing. The bearings themselves have identical design, fabrication and mechanical features. However, the "double" pillow block is used only on Arrangement 2 Fans. These are belt driven units with pulley and wheel overhung. The double bearing is mounted on a bracket which is securely welded to the side of the fan housing.

OIL RING SLEEVE BEARINGS

Oil ring lubricated sleeve bearings are available at slight additional cost on all Trane Fans having a wheel diameter of 18" or more. These bearings are especially designed for fan duty. They are of the self-aligning, precision built, babitted bearing type.

The design of the oil seal prevents leakage of oil and entrance of foreign material into the bearing. This is of particular importance because of the high temperature and velocity often encountered in fan applications.

Dependable lubrication is insured by the use of T sectional oil rings. Bearings in sizes from $1\frac{1}{8}$ " to $3\frac{1}{8}$ " inclusive have one ring while the larger bearings have two.

Oil ring lubricated sleeve bearings of the type illustrated in Figures 18 and 19 are designed for installation on Trane Fans with Drive Arrangement 1, 3, 6, 7, and 8.

Figure 22 illustrates the type of oil ring lubricated sleeve bearing used on Trane Fans having Drive Arrangement 2 and 5.

GRAPHITE INSERT SLEEVE BEARINGS

Graphite insert sleeve bearings—Figure 21—are also available on Fan No. 15 and smaller when sleeve, rather than ball, bearings are desired. These bearings are manufactured from high grade cast phosphor bronze. The base of the bushing contains graphite and graphite feed plugs connect bushing and reservoir so that the required lubrication is distributed to all points of the bearing as needed.

The bearings are rigidly mounted upon welded steel supports. They will operate in the field without the necessity of frequent lubrication or attention.

Heat responsive, these bearings draw larger amounts of lubricant from the reservoir if it is required to reduce high temperatures resulting from overloading or foreign matter, thus protecting both shaft and bearing.

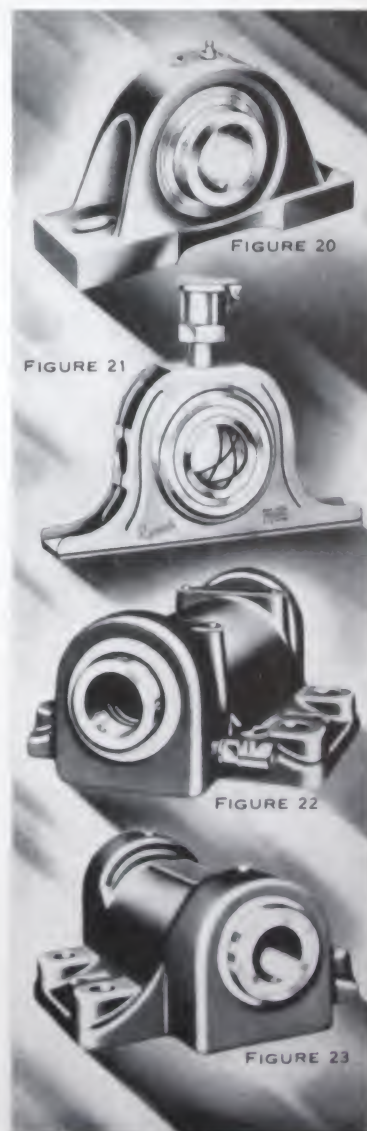


FIGURE 20

FIGURE 21

FIGURE 22

FIGURE 23

AUXILIARY EQUIPMENT



FIGURE 24

On many fan installations certain conditions exist that make it desirable to give special treatment to standard fans. Trane engineers and laboratory technicians have analyzed the various conditions that may be encountered and have worked out special features and designed a wide range of auxiliary equipment in anticipation of these conditions.

It is well to contact Trane field engineers whenever extraordinary conditions indicate the need for special treatment since this company manufactures items to help solve practically any problems encountered in air handling for heating, ventilating and air conditioning purposes. All of this equipment is designed for use with Trane Fans and the utmost in efficient operation is assured.

TRANE ISOLATING FAN BASES

Whenever the ultimate in smooth, quiet fan operation is required, Trane Isolating Fan Bases should be installed. When these bases are used, fans and motors are actually held in suspension from building floor and foundations. Any vibration of motor and fan cannot be transmitted through the building. In addition, the heavy rubber fan mountings deaden any noises.

The bases consist of an integral heavy welded steel angle sub-base and rubber-in-shear isolators properly located to isolate fan and motors from the foundation. The rubber-in-shear is considerably more effective than straight compression since it multiplies the isolating capacity of the rubber.

Bases with cork isolators are also available.

For small units or other applications where complete sub-base is not required, individual isolators can be supplied.

VOLUME CONTROLS

On some installations it is necessary that the air quantity delivered by the fan be varied from season to season or even from day to day. Whenever this condition is encountered, the fan should be selected to deliver the maximum volume required. Then the actual volume that is desired can be obtained by reducing the air volume from this maximum. The reduction can be accomplished in any of three different ways:

1. The Outlet Damper Method.
2. The Variable Speed Method.
3. The Radial Vane Inlet Control Method.

Since each of these methods has certain advantages, Trane has available the equipment required for all three.

OUTLET DAMPERS

Dampers installed in the discharge duct provide a simple, low cost and effective means of controlling air volume and reducing power consumption. They are sturdily constructed, easy to install, positive in operation and they may be used with the less expensive standard speed motors.

All dampers for this duty are designed with counteracting blades to provide a reduction in free area without deflecting the air stream.

These dampers are available for use with all Trane Fans, but are more effective on FC than BI. They are especially recommended for smaller sized fans.

The Variable Speed Method, and, to a lesser degree, the Inlet Control Method will reduce power consumption somewhat more than Outlet Dampers. However, the lower first cost of Outlet Dampers will in many cases substantially outweigh the savings in power consumption even over extended periods of time.

VARIABLE SPEED

Several different methods of controlling fan speed are available. If only two speeds are required, a two-speed motor will probably be satisfactory. Then, too, there are variable speed sheaves which permit up to a 20% change from normal speed.

If the fan will be required to operate at one speed during the summer months and another during the winter, it may be more satisfactory to have two different drives. Any of these devices may be used with inlet controls or outlet dampers.

Variable speed 3-phase motors are sometimes used, but both motors and controllers are expensive.

Practically speaking each installation involving varying fan speeds has certain requirements or characteristics which make it unique. The information presented here is intended merely to outline the equipment which Trane has available for this requirement. It is suggested that Trane field engineers be consulted whenever variable speed fan operation is desired.

RADIAL VANE INLET CONTROL

Trane FC and BI fans in sizes 24 and larger can be furnished with adjustable inlet controls that are either automatically or manually operated.

On BI Fans vanes are installed inside of the bearing in the inlet cone. On FC Fans they are installed in a cylinder mounted outside of the fan housing.

When selecting a fan on which inlet vanes are to be used, it is necessary to increase the static pressure by the resistance of the wide open vanes. For outlet velocities:

Up to 1800' min.	Add 1/16"
1800' to 2600' min.	Add 1/8"
Over 2600' min.	Add 1/4"

BELT GUARD

Trane belt guards are designed to give complete protection from the moving parts of the drive and are arranged so that installation is extremely simple.

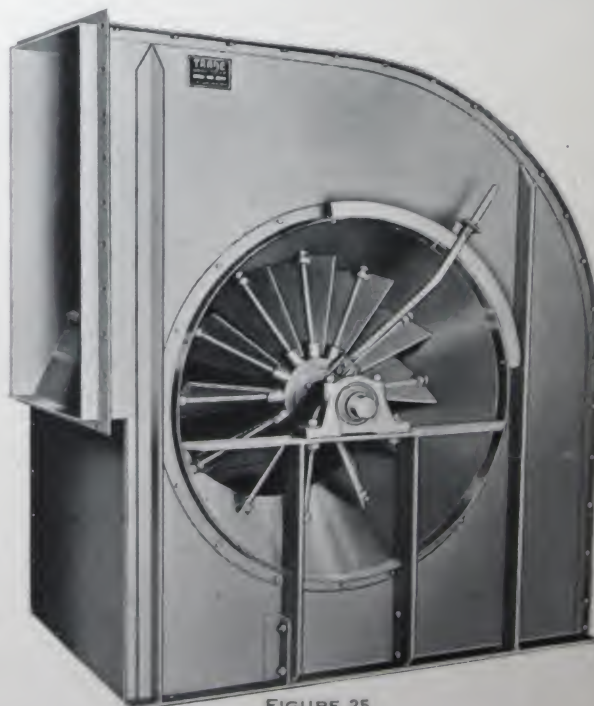


FIGURE 25



FORWARD CURVED

FAN WHEEL CHARACTERISTICS

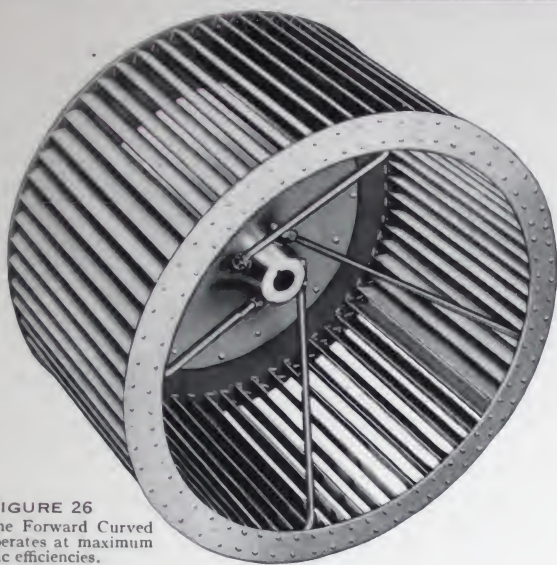


FIGURE 26
The Trane Forward Curved Wheel operates at maximum volumetric efficiencies.

DESIGN

The Trane Forward Curved Multi-blade Fan Wheel is distinguished for its high pressure producing and high air volume characteristics.

In this connection it should be remembered that in any centrifugal fan two forces are responsible for the air movement. One of these comes from the forward motion of the wheel. The second force results from the blades themselves and their design. Since these blades are curved forward they impart a forward motion to the air.

Since the blades and the wheel combine in moving the air forward it leaves the fan outlet at a higher forward velocity than would otherwise be possible. Due to this higher velocity, FC Fans:

1. Have highest volumetric efficiency ratings. FC Fans are more compact, for any given air delivery and static pressure they occupy less space.
2. Have highest pressure effectiveness. The design of the forward curved blades provides satisfaction of any pressure requirement at the lowest possible tip speed. Generally speaking FC Fans operate at a lower noise level.
3. Have lowest horse power requirements. The power consumed over a period of time is a governing factor in fan selection outweighing the initial cost of most cases.

Forward Curved Fan Wheels do not have a self-limiting non-overloading power characteristic but, with the exception of extreme cases, the advantages of this characteristic are somewhat over-rated.

Reference to basic fan laws shows that when a fan is operated on a given system the pressures vary directly as the square of the CFM. Therefore it becomes apparent that the air delivery system to which any fan is connected limits the amount that horse power can increase. Actual installations where static pressure estimates have been more than 30% too high have shown horse power increases of only 10%. Since on practically all installations motors are somewhat oversized, this 10% increase is not of major importance.

CURVE CHARACTERISTICS

The Curves on Figure 28 show the operating characteristics of Trane FC Fans. It will be noted that the high point of the mechanical efficiency curve occurs very near the high points of total and static pressure curves. It will also be noted that the top of the mechanical efficiency curve is comparatively level and slants gradually off to the free

delivery point. All fans should be selected to fall to the right of the high point on the static pressure curve but as close to the high point as possible. The curves show that the area to the right of the high point of the static pressure curve coincides with the highest area in the mechanical efficiency curve. Therefore a fan selected to satisfy static pressure requirements will operate at or vary near to peak mechanical efficiency.

WHEEL CONSTRUCTION

Trane FC Fan Wheels have sixty-four narrow curved blades, except the No. 8 which has forty-eight blades. The blades are die-stamped steel constructed so that the curve of each is uniform and exact. The rims and back plates are stamped steel with the openings for the blades die cut. Every blade is set into the wheel at exactly the same angle.

The hub has been designed in accordance with the strictest aerodynamic laws. It is correctly streamlined and wind-tunnel tested with the result that its curvature aids in changing the direction of the incoming air from axial to radial with the least possible pressure loss.

Due to the narrow rim, the shallow blades and the streamlined hub, the inlet opening is almost as large as the diameter of the wheel. Every Trane Wheel is carefully balanced and checked for weight distribution and alignment before it is assembled in the casing.

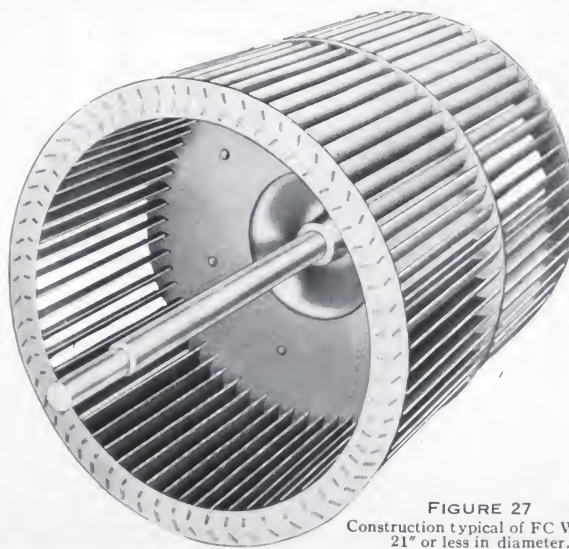


FIGURE 27
Construction typical of FC Wheels 21" or less in diameter.

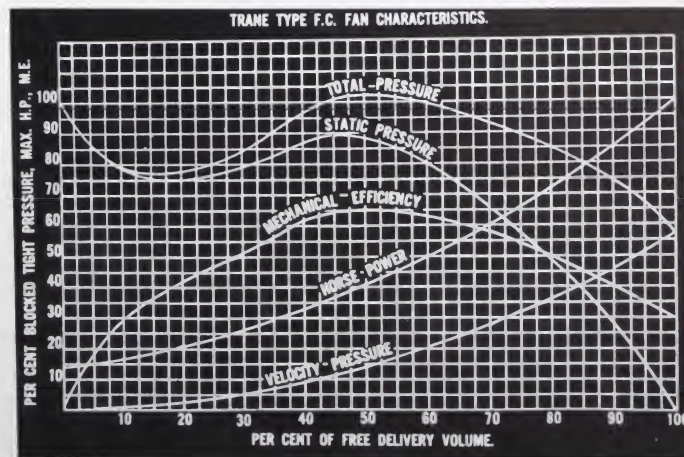


FIGURE 28

BACKWARDLY INCLINED

FAN WHEEL CHARACTERISTICS



FIGURE 29
The self limiting non over-loading Trane Backwardly Inclined Wheel gives outstanding performance.

DESIGN

The steep pressure curve; non-overloading power characteristics and relatively high peripheral speed are distinguishing features of Trane Backwardly Inclined Fan Wheels.

As indicated in Figure 31 the pressure curves for Backwardly Inclined Fans begin to drop at low capacities. They fall rapidly after reaching 50% of free delivery volume. The steep portions of these curves indicate that fans of this type will operate at almost constant capacity under changing pressures.

FOR DIRECT DRIVE

Trane BI Fans operate at tip speeds approximately 175% higher than those found in Forward Curved Fans. Since this is true, BI Fans are better suited for direct connection to standard motors which operate at speeds that are too high for other types of fans. Standard speed motors present advantages of availability and lower cost that are too important to be ignored in the consideration of direct driven ventilating units.

The horse power curve in Figure 31 indicates that Trane Backwardly Inclined Fans have truly self limiting, non-overloading power characteristics. The power consumed rises to a maximum point near the 80% of free delivery volume and from there on declines while the air volume increases. This makes these fans the obvious selections wherever wide fluctuations in air volume are expected to occur during normal operation of the fan. On systems where such fluctuations are to be regulated by means of dampers or by-passes, the Backwardly Inclined Fans are particularly desirable.

FOR PROCESS WORK

Backwardly Inclined Fans are frequently desirable for process heating and drying applications, principally because the designing of equipment for these purposes is apt to depend somewhat on a trial and error method. After fans and coils are installed it is often discovered that by changing air temperatures and volumes, more effective processing will result. Much experimenting is often necessary before the best possible combination of heating coils and air volume is discovered. Here the advantages of fast falling pressure curves and self-limiting, non-overloading power characteristics of BI Fans become apparent. Because of these characteristics, BI Units will operate at a nearly constant capacity regardless of slight changes in pressure and will not overload their motors.

A Backwardly Inclined Fan to have the same capacity as a Forward Curved Unit will usually have to be one size larger than the FC.

MECHANICAL SPECIFICATIONS

Backwardly Inclined Wheels have twelve relatively narrow blades with a special, accurately formed rim. The blades slant backward to the direction of discharge.

The back plate and hub assembly conforms in every detail to aerodynamic laws as they apply to fans and air handling. It is correctly streamlined in design so that it diverts incoming air to the direction of discharge with the least possible resistance to the air flow and the absolute minimum of eddy currents. Quiet, stabilized fan operation is assured.

BALANCE

All BI Wheels are carefully balanced before assembly. Weight distribution is checked with extreme care. The die-formed blades are accurately located and spaced. All of these design features contribute to smooth operation at the highest speeds that may be encountered. Each completed unit is test-run before shipment.

For complete information on capacities, see pages 32 to 45. Roughing-in dimensions are on pages 48 to 61.

FIGURE 30

Fans with Double Width Wheels are best for installation where vertical space is at a minimum.

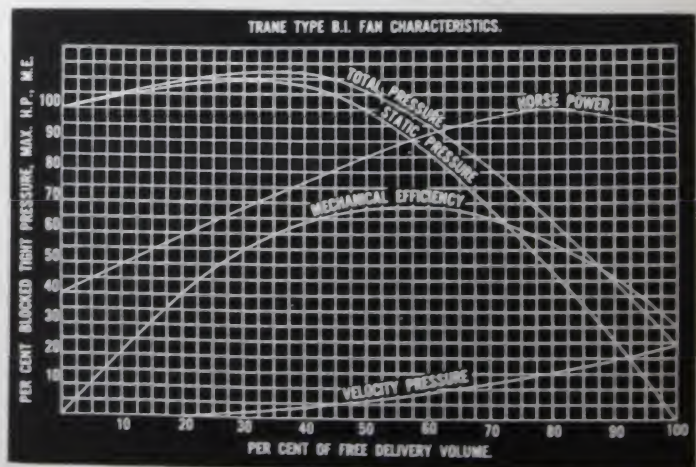


FIGURE 31



SPECIAL APPLICATION FAN

MULTIPLE FANS

For those installations where headroom is at a minimum, Trane Multiple Centrifugal Fan units provide the economical answer to ventilation problems. Figure 32 illustrates a twin fan unit. Similar equipment with three or even four fans on each unit can be obtained. Only double width, double inlet fans are used on units of this type. Fan diameters may range up to 30".

Regardless of whether two, three or four fans are used on a single unit, they have one common base and a single shaft. They are all driven by the same motor and drive assembly. The unit illustrated is designed for installation in a plenum chamber; however, Trane will supply multiple fan units enclosed in their own sheet metal chambers if desired.

Trane's experience in the manufacture of fans for special applications extends over a period of many years and includes the design and fabrication of a vast variety of units. Some of them have been a part of exacting process applications. Others have helped men live and work in spite of extreme temperature and humidity conditions. They have seen service in the sub-stratosphere and supplied life sustaining ventilation to submariners.

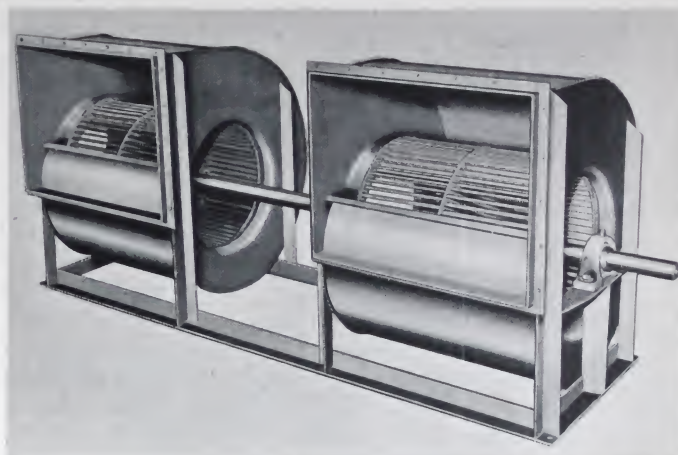


FIGURE 32
Multiple Fans deliver large quantities of air and require a minimum amount of headroom.

FAN SELECTION

WHAT TYPE WHEEL SHOULD BE USED

When selecting a fan, one must first determine if a Forward Curved or Backwardly Inclined Fan is desired.

Either the Forward Curved or Backwardly Inclined Fan will satisfy all heating, air conditioning and ventilating requirements, but neither is an "all purpose" fan. While some applications may be satisfied by a fan of either type, each has certain features which make it most desirable for any single installation. Since Trane manufactures both kinds it can present, without bias, comparisons of both types which may be of assistance in determining which Fan is desired.

For comparable performance it is usually necessary to select a BI Fan that is one size larger than the FC.

The FC will generally operate more quietly.

BI Fans have a truly self-limiting, non-overloading power characteristic. FC Fans do not.

It is of prime importance that the discharge duct from a FC Fan be the same size as the fan outlet and that the duct extend at least $1\frac{1}{2}$ times the diameter of the fan before any change in size or direction is made. This is not so important a consideration when BI Fans are used.

BI Fans, especially where larger sized units are required, are preferred for direct connection to motors.

FC Fans, because they are lower in initial cost, quieter in operation, and occupy less space, are more generally used for the ordinary air conditioning and ventilating installation.

WHAT SIZE WHEEL SHOULD BE USED

After determining if a FC or BI Fan is to be used, the main points to be considered are:

1. The volume of air that must be handled.
2. The static pressure that will be encountered.
3. Whether single width or double width fans are to be used.
4. The noise level that can be tolerated.

These points are not necessarily in the order of their importance and other considerations may influence selection. The above items are, however, basic in the consideration of all ventilating units. Because they are vital to proper selection, they were all taken into consideration in the preparation of Trane capacity tables. While they are spoken of as "capacity tables", these tables are actually considerably more than that, for their proper usage makes the selection of exactly the right fan a comparatively simple matter.

Separate Tables

A separate table is provided for: each single width FC fan numbering from 12 through 66, pages 15 to 22; each double width FC fan numbering from 8 through 66, pages 23 to 31, each single width BI fan numbering 15 through 66, pages 32 to 38, and each double width BI fan numbering 15 through 66, pages 39 to 45.

These tables contain:

1. The volume of air in cubic feet per minute (CFM).
2. The outlet velocity.
3. A wide range of static pressures.
4. The tip speed.
5. The revolutions per minute.
6. The brake horse power.

The value of Trane fan tables as a guide to good fan selection lies in the fact that they do not contain any information on tip speeds, RPM or horse power where the selection of that size fan to satisfy the existing conditions would result in unstable, inefficient or noisy operation. This accounts for the blank spaces found at the top or bottom of some of the static pressure columns. To be assured of most efficient fan operation it is well to make selections which lie near but not at the top of this static pressure column.

The VOLUME OF AIR that is required must be calculated before the fan can be selected.

The maximum OUTLET VELOCITY is generally determined by the allowable noise level. The higher the outlet velocity, the higher the noise level is apt to be.

Table 1 shows the approximate outlet velocities and tip speed for maximum efficiency of FC Fans. Table 2 contains the same information for BI Fans.

The STATIC PRESSURE at which the system will operate can be determined. In this connection it should be noted that a fan operating against a high static pressure will produce more noise than the same fan operating against a lower static pressure. For this reason it is well to design a system with the lowest possible static pressure whenever noise level is of paramount importance.

These three factors—Volume of Air, Outlet Velocity and Static Pressure—of fan selection are the known or ascertainable considerations in selecting the proper size of fan. Tip speed, revolutions per minute and brake horse power will be governed by the diameter of wheel that is finally decided upon.

TABLE 1
RECOMMENDED TIP SPEEDS FC FANS

FRICTION OR STATIC PRESSURE	TIP SPEED NECESSARY	OUTLET VELOCITY
$\frac{1}{8}"$	1100 - 1200	700 - 1000
$\frac{1}{4}"$	1400 - 1600	800 - 1200
$\frac{1}{2}"$	2000 - 2200	1000 - 1400
$\frac{3}{4}"$	2400 - 2600	1200 - 1600
1"	2800 - 3000	1400 - 1800
$1\frac{1}{4}"$	3100 - 3300	1600 - 2000
$1\frac{1}{2}"$	3400 - 3600	1700 - 2200

When the volume, outlet velocity and static pressure are known, the diameter of the wheel that will be required can easily be determined.

Example of Fan Selection

A forward curved single width fan is required that will move 12,000 CFM of air against $\frac{5}{8}"$ of static at an outlet velocity not to exceed 2,000 feet per minute.

Reference to the fan tables starting on page 15 shows that a No. 33 Fan (Table 11) is the smallest unit that will handle 12,000 CFM against $\frac{5}{8}"$ of static. However, the outlet velocity will be over 2,000 feet so the No. 33 is ruled out and the next larger size is considered.

Table 12 indicates that a No. 36 Fan will handle 12,019 CFM against $\frac{5}{8}"$ of static and the outlet velocity is only 1,700. So the 36" Fan is a definite possibility.

Table 13 shows that a No. 40 Fan will move 12,404 CFM against $\frac{5}{8}"$ of static at an outlet velocity of 1,400 ft. So it, too, will be considered.

However, there is still another possibility. According to Table 14 a No. 44 Fan will move 12,960 CFM against the determined static at only 1,200 outlet velocity.

Which fan, then, should be used?

TABLE 2
RECOMMENDED TIP SPEEDS BI FANS

FRICTION OR STATIC PRESSURE	OUTLET VELOCITY	TIP SPEED
$\frac{1}{4}"$	600 - 900	2400 - 3200
$\frac{1}{2}"$	700 - 1000	3200 - 3900
$\frac{3}{4}"$	800 - 1100	3900 - 4500
1"	900 - 1200	4500 - 5000
$1\frac{1}{4}"$	1000 - 1300	5000 - 5500
$1\frac{1}{2}"$	1100 - 1400	5500 - 6000

Preliminary Possibilities

In the first place, errors may have been made in calculating the static pressure. So this should be considered. If the static pressure which was estimated at $\frac{5}{8}"$ proves to be $\frac{3}{4}"$, the following conditions exist:

The No. 36 will handle 12,019 CFM at $\frac{3}{4}"$ static pressure.

The No. 40 will handle 12,404 at $\frac{3}{4}"$ static pressure.

The No. 44 will handle 12,960 at $\frac{3}{4}"$ static pressure. But the figure of 12,960 is right at the top of the column. This, as explained below, is not a good selection. It indicates that the selection of the 44 where only 12,000 CFM are to be moved against $\frac{3}{4}"$ static pressure will be the equivalent of a selection to the left, instead of to the right, of the high point in the static pressure curve Figure 28. Such a selection would very probably result in unstable, noisy operation. And since the static pressure might very easily be underestimated by $\frac{1}{8}"$, the No. 44 would not be a good selection.

This leaves only No. 36 and 40 Fans. Both of them satisfy the CFM outlet velocity, and static pressure requirements. Both will operate at $\frac{1}{2}"$, $\frac{5}{8}"$ or $\frac{3}{4}"$ static and still give satisfactory results.

What will now determine the final selection?

Final Choice

If initial cost and the amount of space required are primarily important, the No. 36 should be used. However, it will consume more power than the No. 40.

If quiet operation and maximum efficiency and economical performance are the most important factors, the No. 40 should be selected.

SELECTING DOUBLE WIDTH FANS

In some cases the vertical space available for a fan installation is limited but there is plenty of horizontal floor space available. When this is true the selection of a double width fan is indicated.

The same general procedure as shown for single width fans will result in correct size selection.

However, when double width double inlet fans are used, both inlets must have equally free access to air. If one inlet is obstructed more than the other, improper operation is certain to result since one-half the fan will deliver more air than the other half.

In this connection it should be constantly remembered that proper installation and location of fans are as important as the selection of the correct sizes. All Trane Fans will operate according to their characteristic curves if they are properly selected, installed and operated. The entire service of the Trane engineering staff is available for consultation and advice on any of the phases of fan installation.

SELECTION OF FANS AT OTHER THAN STANDARD DENSITY

Fan tables are based on air of standard density (Temperature 70° F.; barometric pressure, 29.92" hg.; density .075 pounds per cubic foot).

When a fan is required to handle air at conditions other than standard, a correction must be made in the static pressure before using the table. The horse power from the table must then be corrected. (See Basic Fan Laws 4, 5 and 6, page 65.)

A fan is essentially a constant volume machine and at a given speed on a given system the volume in CFM will not change regardless of the air density. The static pressure, however, changes directly with the density.

The chart in Figure 33 gives air density ratios at conditions other than standard.

Care must be exercised to see that the static pressure for the system is correctly calculated for the specified conditions. All friction tables and charts on ducts, filters, coils, etc., are based on standard air. (For actual friction at conditions other than standard, multiply the figure calculated from tables, using the actual air volume, by the factor from Figure 33.)

Knowing the air volume and actual friction for the specified condition, first divide the friction by the factor from Figure 33. Using the corrected friction and the specified volume, select a fan from the Fan Tables. The outlet velocity, tip speed and Rpm are correct as taken from the tables.

To determine the correct BHP multiply the BHP from the table by the correction factor.

Example

Given—Select an FC DWDI fan to deliver 6,000 CFM, measured at a temperature of 125° F. and a barometric pressure of 27.4" hg, against a static pressure of 1.0". Outlet velocity not to exceed 2,000 feet per minute.

Solution—

Correction factor - .832 (Figure 33).
1" (Specified Static)

.832 (Correction Factor) = 1.2"

Air Volume - 6,000
= 3 square feet minimum

Max. Outlet Velocity 2,000
fan outlet area.

Reference to fan tables will show that an 18 FC DWDI fan is the smallest that can be selected.

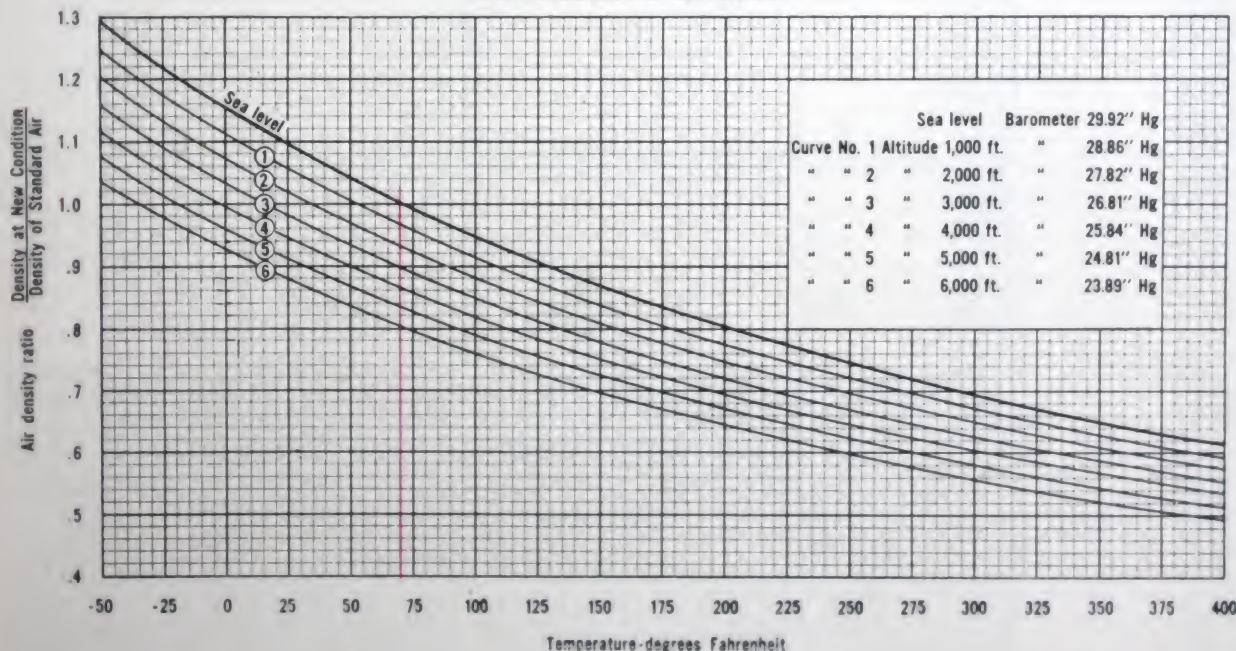
CFM.....	6000
Static.....	1.2
OV.....	1925
RPM.....	663
Tip Speed.....	3120
Brake Horse power.....	2.11

The RPM from the table is correct, but the Brake horse power must be adjusted.

Correct Bhp = 2.11 × factor (.832) = 1.76.

If the fan will, at times, be required to handle denser air, a motor sufficiently large to handle the requirements at the greatest density should be selected.

FIGURE 33
AIR DENSITY RATIOS



TRANE CENTRIFUGAL FANS

TYPE



S W S I	
D W D I	

SIZE RANGE
WHEEL DIAM. CFM

8" thru 30"	255 - 19,600	1*-2-3-4	CONVERTIBLE	LOCKSEAM
33" thru 60"	4,752 - 78,540	1-3	FIXED	BOLTED SEAM Complete Disassembly
66"	19,000 - 95,000	1-3		BOLTED SEAM Complete Disassembly Split Housing
8" thru 30"	510 - 37,000	3	CONVERTIBLE	LOCKSEAM
33" thru 60"	8,800 - 147,800	3	FIXED	BOLTED SEAM Complete Disassembly
66"	35,120 - 175,600	3		BOLTED SEAM Complete Disassembly Split Housing

For heating, air conditioning and ventilating.
For either comfort or process.
For delivering greatest air volumes.
For meeting minimum space requirements.
For most efficient operation.
For operation at lowest tip speeds.
For satisfaction of low noise level requirements.



S W S I	
D W D I	

15" thru 30"	738 - 11,760	1*-2-3-4	CONVERTIBLE	LOCKSEAM
33" thru 60"	3,564 - 46,922	1-3	FIXED	BOLTED SEAM Complete Disassembly
66"	14,256 - 57,024	1-3		BOLTED SEAM Complete Disassembly Split Housing
15" thru 30"	1,309 - 22,200	3	CONVERTIBLE	LOCKSEAM
33" thru 60"	6,600 - 88,680	3	FIXED	BOLTED SEAM Complete Disassembly
66"	26,340 - 105,360	3		BOLTED SEAM Complete Disassembly Split Housing

For heating, air conditioning and ventilating.
For either comfort or process.
For direct connection to motors.
For installations where static pressures are apt to vary widely.
For systems requiring non-overloading self-limiting horse power characteristics.

*Available only in sizes 18 and larger.

TABLE 4

No. 12 SINGLE WIDTH SINGLE INLET FAN — TYPE FC
CIRCUM. = 3.14' WHEEL DIA. 12" OUTLET AREA = 0.785 SQ. FT.

STATIC PRESSURE	1/8"	1/4"	3/8"	1/2"	5/8"					
CFM	OUTLET VEL.	TIP SPEED RPM	HP	TIP SPEED RPM	HP	TIP SPEED RPM	HP	TIP SPEED RPM	HP	
628	800	11115	355	03	11430	456	05	11710	544	07
707	900	11622	370	04	11701	468	06	11730	551	08
785	1000	12351	394	05	12101	481	07	12270	564	09
863	1100	13001	415	06	12501	497	08	12501	573	10
942	1200	13601	440	07	12901	514	09	12901	588	11
1021	1300	14601	465	08	13301	534	10	13301	604	12
1100	1400	15601	490	09	13701	554	11	13701	620	13
1178	1500	16601	515	10	14101	576	12	14101	635	14
1256	1600	17601	540	11	14501	596	13	14501	651	15
1335	1700	18601	565	12	14901	616	14	14901	667	16
1414	1800	19601	590	13	15301	636	15	15301	683	17
1492	1900	20601	615	14	15701	656	16	15701	699	18
1570	2000	21601	640	15	16101	676	17	16101	715	19
1648	2100	22601	665	16	16501	696	18	16501	731	20
1727	2200	23601	690	17	16901	716	19	16901	747	21
1805	2300	24601	715	18	17301	736	20	17301	763	22
1884	2400	25601	740	19	17701	756	21	17701	779	23
1962	2500	26601	765	20	18101	776	22	18101	795	24
2041	2600	27601	790	21	18501	796	23	18501	811	25
2119	2700	28601	815	22	18901	816	24	18901	827	26
2198	2800	29601	840	23	19301	836	25	19301	843	27
2276	2900	30601	865	24	19701	856	26	19701	859	28
2355	3000	31601	890	25	20101	876	27	20101	875	29
2433	3100	32601	915	26	20501	896	28	20501	891	30
2512	3200	33601	940	27	20901	916	29	20901	907	31
2590	3300	34601	965	28	21301	936	30	21301	923	32
2669	3400	35601	990	29	21701	956	31	21701	939	33
2747	3500	36601	1015	30	22101	976	32	22101	955	34
2826	3600	37601	1040	31	22501	996	33	22501	971	35
2904	3700	38601	1065	32	22901	1016	34	22901	987	36
2983	3800	39601	1090	33	23301	1036	35	23301	1003	37
3061	3900	40601	1115	34	23701	1056	36	23701	1019	38
3140	4000	41601	1140	35	24101	1076	37	24101	1035	39
3218	4100	42601	1165	36	24501	1096	38	24501	1051	40
3297	4200	43601	1190	37	24901	1116	39	24901	1067	41
3375	4300	44601	1215	38	25301	1136	40	25301	1083	42
3454	4400	45601	1240	39	25701	1156	41	25701	1099	43
3532	4500	46601	1265	40	26101	1176	42	26101	1115	44
3611	4600	47601	1290	41	26501	1196	43	26501	1131	45
3689	4700	48601	1315	42	26901	1216	44	26901	1147	46
3768	4800	49601	1340	43	27301	1236	45	27301	1163	47
3846	4900	50601	1365	44	27701	1256	46	27701	1179	48
3925	5000	51601	1390	45	28101	1276	47	28101	1195	49
4003	5100	52601	1415	46	28501	1296	48	28501	1211	50
4082	5200	53601	1440	47	28901	1316	49	28901	1227	51
4160	5300	54601	1465	48	29301	1336	50	29301	1243	52
4239	5400	55601	1490	49	29701	1356	51	29701	1259	53
4317	5500	56601	1515	50	30101	1376	52	30101	1275	54
4396	5600	57601	1540	51	30501	1396	53	30501	1291	55
4474	5700	58601	1565	52	30901	1416	54	30901	1307	56
4553	5800	59601	1590	53	31301	1436	55	31301	1323	57
4631	5900	60601	1615	54	31701	1456	56	31701	1339	58
4710	6000	61601	1640	55	32101	1476	57	32101	1355	59
4788	6100	62601	1665	56	32501	1496	58	32501	1371	60
4867	6200	63601	1690	57	32901	1516	59	32901	1387	61
4945	6300	64601	1715	58	33301	1536	60	33301	1403	62
5024	6400	65601	1740	59	33701	1556	61	33701	1419	63
5102	6500	66601	1765	60	34101	1576	62	34101	1435	64
5181	6600	67601	1790	61	34501	1596	63	34501	1451	65
5259	6700	68601	1815	62	34901	1616	64	34901	1467	66
5338	6800	69601	1840	63	35301	1636	65	35301	1483	67
5416	6900	70601	1865	64	35701	1656	66	35701	1499	68
5495	7000	71601	1890	65	36101	1676	67	36101	1515	69
5573	7100	72601	1915	66	36501	1696	68	36501	1531	70
5652	7200	73601	1940	67	36901	1716	69	36901	1547	71
5730	7300	74601	1965	68	37301	1736	70	37301	1563	72
5809	7400	75601	1990	69	37701	1756	71	37701	1579	73
5887	7500	76601	2015	70	38101	1776	72	38101	1595	74
5966	7600	77601	2040	71	38501	1796	73	38501	1611	75
6044	7700	78601	2065	72	38901	1816	74	38901	1627	76
6123	7800	79601	2090	73	39301	1836	75	39301	1643	77
6201	7900	80601	2115	74	39701	1856	76	39701	1659	78
6280	8000	81601	2140	75	40101	1876	77	40101	1675	79
6358	8100	82601	2165	76	40501	1896	78	40501	1691	80
6437	8200	83601	2190	77	40901	1916	79	40901	1707	81
6515	8300	84601	2215	78	41301	1936	80	41301	1723	82
6594	8400	85601	2240	79	41701	1956	81	41701	1739	83
6672	8500	86601	2265	80	42101	1976	82	42101	1755	84
6751	8600	87601	2290	81	42501	1996	83	42501	1771	85
6829	8700	88601	2315	82	42901	2016	84	42901	1787	86
6908	8800	89601	2340	83	43301	2036	85	43301	1803	87
6986	8900	90601	2365	84	43701	2056	86	43701	1819	88
7065	9000	91601	2390	85	44101	2076	87	44101	1835	89
7143	9100	92601	2415	86	44501	2096	88	44501	1851	90
7222	9200	93601	2440	87	44901	2116	89	44901	1867	91
7300	9300	94601	2465	88	45301	2136	90	45301	1883	92
7379	9400	95601	2490	89	45701	2156	91	45701	1899	93
7457	9500	96601	2515	90	46101	2176	92	46101	1915	94
7536	9600	97601	2540	91	46501	2196	93	46501	1931	95
7614	9700	98601	2565	92	46901	2216	94	46901	1947	96
7693	9800	99601	2590	93	47301	2236	95	47301	1963	97
7771	9900	100601	2615	94	47701	2256	96	47701	1979	98
7850	10000	101601	2640	95	48101	2276	97	48101	1995	99
7928	10100	102601	2665	96	48501	2296	98	48501	2011	100
8007	10200	103601	2690	97	48901	2316	99	48901	2027	101
8085	10300	104601	2715	98	49301	2336	100	49301	2043	102
8164	10400	105601	2740	99	49701	2356	101	49701	2059	103
8242	10500	106601	2765	100	50101	2376	102	50101	2075	104
8321	10600	107601	2790	101	50501	2396	103	50501	2091	105
8399	10700	108601	2815	102	50901	2416	104	50901	2107	106
8478	10800	109601	2840	103	51301	2436	105	51301	2123	107
8556	10900	110601	2865	104	51701	2456	106	51701	2139	108
8635	11000	111601	2890	105	52101	2476	107	52101	2155	109
8713	11100	112601	2915	106	52501	2496	108	52501	2171	110
8792	11200	113601	2940	107	52901	2516	109	52901	2187	111
8870	11300	114601	2965	108	53301	2536	110	53301	2203	112
8949	11400	115601	2990	109	53701	2556	111	53701	2219	113
9027	11500	116601	3015	110	54101	2576	112	54101	2235	114
9106	11600	117601	3040	111	54501	2596	113	54501	2251	115
9184	11700	118601	3065	112	54901	2616	114	54901	2267	116
9263	11800	119601	3090	113	55301	2636	115	55301	2283	117
9341	11900	120601	3115	114	55701	2656	116	55701	2299	118
9420	12000	121601	3140	115	56101	2676	117	56101	2315	119
9498	12100	122601	3165	116	56501	2696	118	56501	2331	120
9577	12200	123601	3190	117	56901	2716	119	56901	2347	121
9655	12300	124601	3215	118	57301	2736	120	57301	2363	122
9734	12400	125601	3240	119	57701	2756	121	57701	2379	123
9812	12500	126601	3265	120	58101	2776	122	58101	2395	124
9891	12600	127601	3290	121	5					

FC - SWSI

TABLE 6

No. 18 SINGLE WIDTH SINGLE INLET FAN — TYPE FC
CIRCUM. = 4.71' WHEEL DIA. 18" OUTLET AREA = 1.83 SQ. FT.

STATIC PRESSURE	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1 5/8"	2"	2 1/4"	2 1/2"	2 3/4"	3"
CFM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM
1416	900	1115	236	16	1710	363	14			
1593	900	1162	246	18	1770	375	16	1975	419	21
1770	1000	1235	262	14	1770	375	18	1990	428	24
1947	1100	1300	278	12	1560	332	16	1800	382	21
2124	1200	1365	294	15	1615	343	19	1845	392	25
2301	1300	1430	310	18	1675	356	23	1895	402	29
2478	1400	1495	326	21	1740	369	27	1945	413	33
2655	1500	1560	342	24	1800	382	31	1995	424	37
2832	1600	1625	358	27	1860	395	35	2050	435	41
3009	1700	1690	374	30	1920	408	39	2100	444	44
3186	1800	1755	390	33	1980	421	43	2150	452	47
3363	1900	1820	406	36	2040	434	47	2200	461	50
3540	2000	1885	422	39	2100	447	51	2250	470	53
3717	2100	1950	438	42	2160	460	55	2300	479	56
3894	2200	2015	454	45	2220	473	59	2350	488	59
4071	2300	2080	470	48	2280	486	63	2400	497	62
4248	2400	2145	486	51	2340	499	67	2450	506	65
4425	2500	2210	502	54	2400	512	71	2500	515	68
4602	2600	2275	518	57	2460	525	75	2550	524	71
4779	2700	2340	534	60	2520	538	79	2600	533	74
4956	2800	2405	550	63	2580	551	83	2650	542	77
5133	2900	2470	566	66	2640	564	87	2700	551	80
5310	3000	2535	582	69	2700	577	91	2750	560	83
5487	3100	2600	598	72	2760	590	95	2800	569	86
5664	3200	2665	614	75	2820	603	99	2850	578	89
5841	3300	2730	630	78	2880	616	103	2900	587	92
6018	3400	2795	646	81	2940	629	107	2950	596	95
6195	3500	2860	662	84	3000	642	111	3000	605	98
6372	3600	2925	678	87	3060	655	115	3050	614	101
6549	3700	2990	694	90	3120	668	119	3100	623	104
6726	3800	3055	710	93	3180	681	123	3150	632	107
6903	3900	3120	726	96	3240	694	127	3200	641	110
7080	4000	3185	742	99	3300	707	131	3250	650	113
7257	4100	3250	758	102	3360	720	135	3300	659	116
7434	4200	3315	774	105	3420	733	139	3350	668	119
7611	4300	3380	790	108	3480	746	143	3400	677	122
7788	4400	3445	806	111	3540	759	147	3450	686	125
7965	4500	3510	822	114	3600	772	151	3500	695	128
8142	4600	3575	838	117	3660	785	155	3550	704	131
8319	4700	3640	854	120	3720	798	159	3600	713	134
8496	4800	3705	870	123	3780	811	163	3650	722	137
8673	4900	3770	886	126	3840	824	167	3700	731	140
8850	5000	3835	902	129	3900	837	171	3750	740	143
9027	5100	3900	918	132	3960	850	175	3800	749	146
9204	5200	3965	934	135	4020	863	179	3850	758	149
9381	5300	4030	950	138	4080	876	183	3900	767	152
9558	5400	4095	966	141	4140	889	187	3950	776	155
9735	5500	4160	982	144	4200	902	191	4000	785	158
9912	5600	4225	998	147	4260	915	195	4050	794	161
10089	5700	4290	1014	150	4320	928	199	4100	803	164
10266	5800	4355	1030	153	4380	941	203	4150	812	167
10443	5900	4420	1046	156	4440	954	207	4200	821	170
10620	6000	4485	1062	159	4500	967	211	4250	830	173
10797	6100	4550	1078	162	4560	980	215	4300	839	176
10974	6200	4615	1094	165	4620	993	219	4350	848	179
11151	6300	4680	1110	168	4680	1006	223	4400	857	182
11328	6400	4745	1126	171	4740	1019	227	4450	866	185
11505	6500	4810	1142	174	4800	1032	231	4500	875	188
11682	6600	4875	1158	177	4860	1045	235	4550	884	191
11859	6700	4940	1174	180	4920	1058	239	4600	893	194
12036	6800	5005	1190	183	4980	1071	243	4650	902	197
12213	6900	5070	1206	186	5040	1084	247	4700	911	200
12390	7000	5135	1222	189	5100	1097	251	4750	920	203
12567	7100	5200	1238	192	5160	1110	255	4800	929	206
12744	7200	5265	1254	195	5220	1123	259	4850	938	209
12921	7300	5330	1270	198	5280	1136	263	4900	947	212
13098	7400	5395	1286	201	5340	1149	267	4950	956	215
13275	7500	5460	1302	204	5400	1162	271	5000	965	218
13452	7600	5525	1318	207	5460	1175	275	5050	974	221
13629	7700	5590	1334	210	5520	1188	279	5100	983	224
13806	7800	5655	1350	213	5580	1201	283	5150	992	227
13983	7900	5720	1366	216	5640	1214	287	5200	1001	230
14160	8000	5785	1382	219	5700	1227	291	5250	1010	233
14337	8100	5850	1398	222	5760	1240	295	5300	1019	236
14514	8200	5915	1414	225	5820	1253	299	5350	1028	239
14691	8300	5980	1430	228	5880	1266	303	5400	1037	242
14868	8400	6045	1446	231	5940	1279	307	5450	1046	245
15045	8500	6110	1462	234	6000	1292	311	5500	1055	248
15222	8600	6175	1478	237	6060	1305	315	5550	1064	251
15399	8700	6240	1494	240	6120	1318	319	5600	1073	254
15576	8800	6305	1510	243	6180	1331	323	5650	1082	257
15753	8900	6370	1526	246	6240	1344	327	5700	1091	260
15930	9000	6435	1542	249	6300	1357	331	5750	1100	263
16107	9100	6500	1558	252	6360	1370	335	5800	1109	266
16284	9200	6565	1574	255	6420	1383	339	5850	1118	269
16461	9300	6630	1590	258	6480	1396	343	5900	1127	272
16638	9400	6695	1606	261	6540	1409	347	5950	1136	275
16815	9500	6760	1622	264	6600	1422	351	6000	1145	278
16992	9600	6825	1638	267	6660	1435	355	6050	1154	281
17169	9700	6890	1654	270	6720	1448	359	6100	1163	284
17346	9800	6955	1670	273	6780	1461	363	6150	1172	287
17523	9900	7020	1686	276	6840	1474	367	6200	1181	290
17700	10000	7085	1702	279	6900	1487	371	6250	1190	293
17877	10100	7150	1718	282	6960	1500	375	6300	1199	296
18054	10200	7215	1734	285	7020	1513	379	6350	1208	299
18231	10300	7280	1750	288	7080	1526	383	6400	1217	302
18408	10400	7345	1766	291	7140	1539	387	6450	1226	305
18585	10500	7410	1782	294	7200	1552	391	6500	1235	308
18762	10600	7475	1798	297	7260	1565	395	6550	1244	311
18939	10700	7540	1814	300	7320	1578	399	6600	1253	314
19116	10800	7605	1830	303	7380	1591	403	6650	1262	317
19293	10900	7670	1846	306	7440	1604	407	6700	1271	320
19470	11000	7735	1862	309	7500	1617	411	6750	1280	323
19647	11100	7800	1878	312	7560	1630	415	6800	1289	326
19824	11200	7865	1894	315	7620	1643	419	6850	1298	329
20001	11300	7930	1910	318	7680	1656	423	6900	1307	332
20178	11400	7995	1926	321	7740	1669	427	6950	1316	335
20355	11500	8060	1942	324	7800	1682	431	7000	1325	338
20532	11600	8125	1958	327	7860	1695	435	7050	1334	341
20709	11700	8190	1974	330	7920	1708	439	7100	1343	344
20886	11800	8255	1990	333	7980	1721	443	7150	1352	347
21063	11900	8320	2006	336	8040	1734	447	7200	1361	350
21240	12000	8385	2022	339	8100	1747	451	7250	1370	353
21417	12100	8450	2038	342	8160	1760	455	7300	1379	356
21594	12200	8515	2054	345	8220	1773	459	7350	1388	359
21771	12300	8580	2070	348	8280	1786	463	7400	1397	362
21948	12400	8645	2086	351	8340	1799	467	7450	1406	365
22125	12500	8710	2102	354	8400	1812	471	7500	1415	368
22302	12600	8775	2118							

TABLE 8

No. 24 SINGLE WIDTH SINGLE INLET FAN — TYPE FC
CIRCUM. = 6.28" WHEEL DIA. 24" OUTLET AREA = 3.235 SQ. FT.

STATIC PRESSURE ➤		1/8"		1/4"		3/8"		1/2"		5/8"	
CFM	OUTLET VEL.	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP
2,513	800	1082	172	12	1405	224	16	1695	270	24	
2,827	900	1133	180	14	1435	229	20	1705	271	28	
3,142	1000	1186	189	17	1475	235	24	1730	275	32	19
3,456	1100	1245	198	21	1501	240	29	1755	279	37	19
3,770	1200	1310	209	26	1560	248	33	1790	285	42	35
4,084	1300	1365	217	31	1615	257	39	1835	292	48	35
4,400	1400	1450	231	37	1670	266	46	1880	299	56	35
4,711	1500				1730	275	53	1930	307	65	35
5,026	1600				1790	285	62	1980	315	74	35
5,340	1700				1850	295	73	2030	323	84	35
5,654	1800				1900	303	83	2085	332	95	36
5,969	1900										
6,283	2000										
6,597	2100										
6,912	2200										
7,226	2300										
7,540	2400										
STATIC PRESSURE ➤		3/4"		7/8"		1"		1 1/4"		1 1/2"	
3,770	1200	12405	383	72	12600	414	83				
4,084	1300	12415	385	79	12610	416	91	12770	441	11	04
4,400	1400	12440	389	87	12615	416	100	12780	443	12	31
4,711	1500	12465	393	95	12630	419	108	12790	444	12	31
5,026	1600	12500	398	110	12660	424	120	12810	447	13	32
5,340	1700	12540	404	118	12695	429	130	12835	451	14	34
5,654	1800	12585	412	133	12725	434	144	12870	457	15	31
5,969	1900	12625	418	147	12760	439	160	12900	462	17	31
6,283	2000	12675	426	162	12810	447	178	12950	470	19	32
6,597	2100	12780	440	196	12900	462	212	13020	481	22	32
6,912	2200	12890	460	238	13010	479	252	13120	497	26	33
7,226	2300	13000	478	280	13125	498	300	13230	514	33	34
7,540	2400	13130	498	330	13240	516	350	13340	532	39	35
7,854	2500	13300	511	380	13350	533	410	13460	551	46	36
8,168	2600	13480	525	430	13470	553	470	13580	570	54	37
8,482	2700	13670	540	480	13590	576	530	13700	590	62	38
8,796	2800	13870	556	530	13710	600	590	13820	610	70	39
9,110	2900	14080	573	580	13830	624	650	13940	630	78	40
9,424	3000	14300	591	630	13950	648	710	14060	650	86	41
9,738	3100	14520	610	680	14070	672	770	14180	670	94	42
10,052	3200	14750	630	730	14190	696	830	14300	690	102	43
10,366	3300	14980	651	780	14310	720	890	14420	710	110	44
10,680	3400	15220	672	830	14430	744	950	14540	730	118	45
10,994	3500	15470	694	880	14550	768	1010	14660	750	126	46
11,308	3600	15730	717	930	14670	792	1070	14780	770	134	47
11,622	3700	16000	741	980	14790	816	1130	14900	790	142	48
11,936	3800	16280	766	1030	14910	840	1190	15020	810	150	49
12,250	3900	16570	791	1080	15030	864	1250	15140	830	158	50
12,564	4000	16870	817	1130	15150	888	1310	15260	850	166	51
12,878	4100	17180	843	1180	15270	912	1370	15380	870	174	52
13,192	4200	17500	870	1230	15390	936	1430	15500	890	182	53
13,506	4300	17830	897	1280	15510	960	1490	15620	910	190	54
13,820	4400	18170	925	1330	15630	984	1550	15740	930	198	55
14,134	4500	18520	953	1380	15750	1008	1610	15860	950	206	56
14,448	4600	18880	981	1430	15870	1032	1670	15980	970	214	57
14,762	4700	19250	1010	1480	15990	1056	1730	16100	990	222	58
15,076	4800	19630	1039	1530	16110	1080	1790	16220	1010	230	59
15,390	4900	20020	1069	1580	16230	1104	1850	16340	1030	238	60
15,704	5000	20420	1099	1630	16350	1128	1910	16460	1050	246	61
16,018	5100	20830	1129	1680	16470	1152	1970	16580	1070	254	62
16,332	5200	21250	1160	1730	16590	1176	2030	16700	1090	262	63
16,646	5300	21680	1191	1780	16710	1200	2090	16820	1110	270	64
16,960	5400	22120	1222	1830	16830	1224	2150	16940	1130	278	65
17,274	5500	22570	1253	1880	16950	1248	2210	17060	1150	286	66
17,588	5600	23030	1285	1930	17070	1272	2270	17180	1170	294	67
17,902	5700	23500	1317	1980	17190	1296	2330	17300	1190	302	68
18,216	5800	23980	1349	2030	17310	1320	2390	17420	1210	310	69
18,530	5900	24470	1381	2080	17430	1344	2450	17540	1230	318	70
18,844	6000	24970	1414	2130	17550	1368	2510	17660	1250	326	71
19,158	6100	25480	1447	2180	17670	1392	2570	17780	1270	334	72
19,472	6200	26000	1480	2230	17790	1416	2630	17900	1290	342	73
19,786	6300	26530	1513	2280	17910	1440	2690	18020	1310	350	74
20,100	6400	27070	1546	2330	18030	1464	2750	18140	1330	358	75
20,414	6500	27620	1580	2380	18150	1488	2810	18260	1350	366	76
20,728	6600	28180	1614	2430	18270	1512	2870	18380	1370	374	77
21,042	6700	28750	1649	2480	18390	1536	2930	18500	1390	382	78
21,356	6800	29330	1684	2530	18510	1560	2990	18620	1410	390	79
21,670	6900	29920	1719	2580	18630	1584	3050	18740	1430	398	80
21,984	7000	30520	1754	2630	18750	1608	3110	18860	1450	406	81
22,298	7100	31130	1790	2680	18870	1632	3170	18980	1470	414	82
22,612	7200	31750	1826	2730	18990	1656	3230	19100	1490	422	83
22,926	7300	32380	1862	2780	19110	1680	3290	19220	1510	430	84
23,240	7400	33020	1900	2830	19230	1704	3350	19340	1530	438	85
23,554	7500	33670	1937	2880	19350	1728	3410	19460	1550	446	86
23,868	7600	34330	1975	2930	19470	1752	3470	19580	1570	454	87
24,182	7700	35000	2014	2980	19590	1776	3530	19700	1590	462	88
24,496	7800	35680	2053	3030	19710	1800	3590	19820	1610	470	89
24,810	7900	36370	2093	3080	19830	1824	3650	19940	1630	478	90
25,124	8000	37070	2134	3130	19950	1848	3710	20060	1650	486	91
25,438	8100	37780	2175	3180	20070	1872	3770	20180	1670	494	92
25,752	8200	38500	2217	3230	20190	1896	3830	20300	1690	502	93
26,066	8300	39230	2259	3280	20310	1920	3890	20420	1710	510	94
26,380	8400	39970	2302	3330	20430	1944	3950	20540	1730	518	95
26,694	8500	40720	2346	3380	20550	1968	4010	20660	1750	526	96
27,008	8600	41480	2390	3430	20670	1992	4070	20780	1770	534	97
27,322	8700	42250	2435	3480	20790	2016	4130	20900	1790	542	98
27,636	8800	43030	2480	3530	20910	2040	4190	21020	1810	550	99
27,950	8900	43820	2526	3580	21030	2064	4250	21140	1830	558	100
28,264	9000	44620	2572	3630	21150	2088	4310	21260	1850	566	101
28,578	9100	45430	2619	3680	21270	2112	4370	21380	1870	574	102
28,892	9200	46250	2666	3730	21390	2136	4430	21500	1890	582	103
29,206	9300	47080	2714	3780	21510	2160	4490	21620	1910	590	104
29,520	9400	47920	2762	3830	21630	2184	4550	21740	1930	598	105
29,834	9500	48770	2811	3880	21750	2208	4610	21860	1950	606	106
30,148	9600	49630	2860	3930	21870	2232	4670	21980	1970	614	107
30,462	9700	50500	2910	3980	21990	2256	4730	22100	1990	622	108
30,776	9800	51380	2960	4030	22110	2280	4790	22220	2010	630	109
31,090	9900	52270	3011	4080	22230	2304	4850	22340	2030	638	110
31,404	10000	53170	3062	4130	22350	2328	4910	22460	2050	646	111
31,718	101										

TABLE 12

No. 36 SINGLE WIDTH SINGLE INLET FAN — TYPE FC
CIRCUM. = 9.425' WHEEL DIA. 36" OUTLET AREA = 7.07 SQ. FT.

STATIC PRESSURE →																			
OUTLET		1/8"		1/4"		3/8"		1/2"		5/8"									
CFM	VEL.	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP
5,656	800	1060	1121	23	1388	1471	37												
6,363	900	1105	1172	28	1418	1501	44	1690	1791	59									
7,070	1000	1165	1241	36	1490	1584	52	1710	1811	67									
7,777	1100	1220	1294	44	1567	1661	60	1730	1841	78	1965	2081	98	2185	2311	120			
8,484	1200	1280	1351	53	1630	1724	71	1760	1871	90	1980	2101	110	2195	2331	133			
9,191	1300	1350	1431	64	1693	1787	82	1830	1941	104	2050	2171	125	2225	2361	146			
9,898	1400	1420	1511	75	1756	1850	96	1900	2011	118	2030	2151	138	2255	2391	163			
10,605	1500				1819	1913	108	1970	2081	132	2100	2221	158	2325	2461	184			
11,312	1600				1882	1976	120	2040	2151	146	2180	2291	172	2405	2541	206			
12,019	1700				1945	2039	132	2100	2211	160	2240	2351	186	2465	2601	228			
12,726	1800				2008	2102	144	2160	2271	174	2300	2411	200	2525	2661	250			
13,433	1900				2071	2165	156	2220	2331	188	2360	2471	214	2585	2721	272			
14,140	2000				2134	2228	168	2280	2391	202	2420	2531	228	2645	2781	294			
15,554	2200				2256	2350	180	2400	2511	216	2540	2651	242	2765	2901	316			
16,968	2400				2378	2472	192	2520	2631	230	2660	2771	256	2885	3021	338			
17,996	2600				2499	2593	204	2640	2751	244	2780	2891	270	3005	3141	360			
19,410	2800				2620	2714	216	2760	2871	258	2900	3011	284	3125	3261	382			
21,210	3000				2741	2835	228	2880	2991	272	3020	3131	298	3245	3381	404			
22,624	3200				2862	2956	240	3000	3111	286	3140	3251	312	3365	3501	426			
24,038	3400				2983	3077	252	3120	3231	300	3260	3371	326	3485	3621	448			
25,452	3600				3104	3198	264	3240	3351	314	3380	3491	340	3605	3741	470			
STATIC PRESSURE →																			
OUTLET		1/8"		1/4"		3/8"		1/2"		5/8"									
CFM	VEL.	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP
12,726	1800	1360	1388	5.53															
14,140	2000	1360	1388	6.25	3920	4161	7.05												
15,554	2200	1360	1388	7.15	3920	4161	7.90	4150	4401	8.55	4370	4641	9.60						
16,968	2400	1360	1388	8.20	3960	4201	8.95	4415	4641	9.60	4370	4641	10.6						
18,382	2600	1360	1388	9.10	4010	4251	9.90	4475	4710	10.7	4410	4681	11.8	4760	5071	14.0			
19,796	2800	1360	1388	10.00	4060	4301	10.75	4530	4765	11.5	4450	4721	12.8	4830	5141	15.2			
21,210	3000	1360	1388	10.90	4110	4351	11.65	4585	4815	12.4	4500	4771	13.8	4900	5211	16.4			
22,624	3200	1360	1388	11.80	4160	4401	12.55	4640	4870	13.3	4550	4821	14.8	4950	5261	17.6			
24,038	3400	1360	1388	12.70	4210	4451	13.45	4695	4925	14.2	4600	4871	15.8	5000	5311	18.8			
25,452	3600	1360	1388	13.60	4260	4501	14.35	4750	4980	15.1	4650	4921	16.8	5050	5361	20.0			
STATIC PRESSURE →																			
OUTLET		1/8"		1/4"		3/8"		1/2"		5/8"									
CFM	VEL.	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP
12,726	1800	1360	1388	5.53															
14,140	2000	1360	1388	6.25	3920	4161	7.05												
15,554	2200	1360	1388	7.15	3920	4161	7.90	4150	4401	8.55	4370	4641	9.60						
16,968	2400	1360	1388	8.20	3960	4201	8.95	4415	4641	9.60	4370	4641	10.6						
18,382	2600	1360	1388	9.10	4010	4251	9.90	4475	4710	10.7	4410	4681	11.8	4760	5071	14.0			
19,796	2800	1360	1388	10.00	4060	4301	10.75	4530	4765	11.5	4450	4721	12.8	4830	5141	15.2			
21,210	3000	1360	1388	10.90	4110	4351	11.65	4585	4815	12.4	4500	4771	13.8	4900	5211	16.4			
22,624	3200	1360	1388	11.80	4160	4401	12.55	4640	4870	13.3	4550	4821	14.8	4950	5261	17.6			
24,038	3400	1360	1388	12.70	4210	4451	13.45	4695	4925	14.2	4600	4871	15.8	5000	5311	18.8			
25,452	3600	1360	1388	13.60	4260	4501	14.35	4750	4980	15.1	4650	4921	16.8	5050	5361	20.0			

TABLE 13

No. 40 SINGLE WIDTH SINGLE INLET FAN — TYPE FC
CIRCUM. = 10.55' WHEEL DIA. 40 1/4" OUTLET AREA = 8.86 SQ. FT.

STATIC PRESSURE ➤																			
OUTLET		1/8"		1/4"		3/8"		1/2"		5/8"									
CFM	VEL.	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP
7,088	800	1060	1001	29	1388	1311	46												
7,974	900	1105	1051	35	1418	1351	55	1690	1601	74									
8,860	1000	1165	1101	45	1450	1381	65	1710	1621	84	1960	1861	110						
9,746	1100	1220	1161	55	1497	1411	76	1730	1641	98	1965	1861	123	2185	2071	150			
10,632	1200	1280	1221	66	1530	1451	89	1760	1671	113	1980	1881	138	2195	2081	165			
11,518	1300	1350	1281	80	1577	1491	103	1790	1701	131	2005	1911	157	2205	2091	182			
12,404	1400	1420	1351	94	1635	1551	120	1835	1741	147	2040	1941	175	2225	2112	200			
13,290	1500				1690	1601	140	1885	1791	167	2080	1971	198	2255	2132	218			
14,176	1600				1755	1661	162	1940	1841	189	2120	2021	221	2290	2172	236			
15,062	1700				1820	1721	186	1995	1891	217	2168	2061	248	2330	2212	254			
15,948	1800				1890	1791	213	2050	1942	246	2210	2102	278	2375	2253	272			
16,834	1900							2105	2001	281	2270	2153	315	2425	2303	290			
17,720	2000							2162	2053	313	2330	2213	353	2475	2343	318			
18,606	2100										2340	2213	392	2525	2393	336			
19,492	2200										2440	2314	432	2575	2443	354			
20,378	2300										2500	2445	470	2625	2503	372			
21,264	2400										2560	2445	506	2675	2503	390			
STATIC PRESSURE ➤																			
OUTLET		3/4"		7/8"		1"		1 1/4"		1 1/2"									
CFM	VEL.	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP
10,632	1200																		
11,518	1300	2390	2271	2.20															
12,404	1400	2415	2291	2.38	12590	246	2.78	12765	262	3.09									
13,290	1500	2425	2320	2.62	12600	247	3.03	12770	263	3.35									
14,176	1600	2455	2330	2.88	12620	248	3.27	12776	263	3.64	3090	293	4.41						
15,062	1700	2495	2361	3.17	12650	251	3.53	12800	265	3.95	3100	294	4.69						
15,948	1800	2540	241	3.53	12680	254	3.91	12835	268	4.47	3110	295	5.04	3380	320	5.93			
16,834	1900	2575	244	3.88	12720	258	4.28	12865	271	4.67	3125	297	5.50	3390	321	6.32			
17,720	2000	2620	248	4.21	12770	263	4.66	12900	275	5.07	3165	300	6.07	3420	324	6.76			
18,606	2100	2670	252	4.57	12805	267	5.02	12995	283	5.62	3225	306	6.88	3460	328	7.70			
19,492	2200	2720	257	5.07	12850	270	5.58	13060	290	7.03	3300	313	8.07	3520	334	8.96			
21,264	2400	2820	267	6.16	12940	279	6.58	13060	290	7.03	3300	313	8.07	3520	334	8.96			
23,036	2600	3230	278	7.35	13060	290	7.81	13155	299	8.28	3385	321	9.30	3580	340	10.3			
24,808	2800	3340	288	8.73	13170	300	9.21	13270	310	9.75	3480	330	10.37	3670	348	11.8			
26,580	3000				13280	311	10.7	13380	320	11.2	3580	339	12.2	3770	357	13.4			
28,352	3200							3500	332	12.9	3700	351	14.1	3880	368	15.3			
30,122	3400										3820	362	16.2	3990	378	17.4			
31,896	3600													4100	389	20.0			
STATIC PRESSURE ➤																			
OUTLET		1 3/4"		2"		2 1/4"		2 1/2"		3"									
CFM	VEL.	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP
15,948	1800	3660	347	6.91															
17,720	2000	3670	348	7.83	3920	371	8.84												
19,492	2200	3690	350	8.88	3930	372	9.90	4150	393	10.7	4370	414	12.1						
21,264	2400	3750	355	10.3	3960	375	10.9	4175	396	12.1	4390	416	13.4	4810	456	15.7			
23,036	2600	3820	362	11.4	4010	380	12.4	4215	399	13.4	4410	418	14.9	4780	453	17.5			
24,808	2800	3885	368	13.2	4080	387	14.0	4275	405	15.1	4450	422	16.4	4830	458	19.2			
26,580	3000	3960	375	14.7	4160	394	14.8	4340	413	17.0	4510	427	18.4	4850	460	20.9			
28,352	3200	4050	384	16.7	4240	402	17.7	4410	418	19.2	4580	434	20.6	4910	465	23.0			
30,122	3400	4150	393	18.8	4336	411	19.9	4485	425	21.4	4660	442	23.0	4990	473	25.4			
31,896	3600	4255	403	20.8	4420	419	22.3	4580	434	23.9	4750	450	25.7	5080	481	28.0			
33,668	3800	4380	415	24.1	4540	430	25.2	4685	444	26.6	4850	460	28.3	5150	486	30.6			
35,440	4000	4450	431	26.7	4660	442	28.4	4720	457	29.6	4950	469	31.3	5240	496	33.8			

FC - SWSI

TABLE 14

No. 44 SINGLE WIDTH SINGLE INLET FAN — TYPE FC
CIRCUM. = 11.65' WHEEL DIA. 44" OUTLET AREA = 10.8 SQ. FT.

STATIC PRESSURE	1 1/8"	1 1/4"	3 8"	1 1/2"	1 3/4"	1 5/8"
CFM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM
8,640	1,000	1,100	1,200	1,300	1,400	1,500
9,720	1,100	1,200	1,300	1,400	1,500	1,600
10,800	1,200	1,300	1,400	1,500	1,600	1,700
11,880	1,300	1,400	1,500	1,600	1,700	1,800
12,960	1,400	1,500	1,600	1,700	1,800	1,900
14,040	1,500	1,600	1,700	1,800	1,900	2,000
15,120	1,600	1,700	1,800	1,900	2,000	2,100
16,200	1,700	1,800	1,900	2,000	2,100	2,200
17,280	1,800	1,900	2,000	2,100	2,200	2,300
18,360	1,900	2,000	2,100	2,200	2,300	2,400
19,440	2,000	2,100	2,200	2,300	2,400	2,500
20,520	2,100	2,200	2,300	2,400	2,500	2,600
21,600	2,200	2,300	2,400	2,500	2,600	2,700
22,680	2,300	2,400	2,500	2,600	2,700	2,800
23,760	2,400	2,500	2,600	2,700	2,800	2,900
24,840	2,500	2,600	2,700	2,800	2,900	3,000
25,920	2,600	2,700	2,800	2,900	3,000	3,100
27,000	2,700	2,800	2,900	3,000	3,100	3,200
28,080	2,800	2,900	3,000	3,100	3,200	3,300
29,160	2,900	3,000	3,100	3,200	3,300	3,400
30,240	3,000	3,100	3,200	3,300	3,400	3,500
31,320	3,100	3,200	3,300	3,400	3,500	3,600
32,400	3,200	3,300	3,400	3,500	3,600	3,700
33,480	3,300	3,400	3,500	3,600	3,700	3,800
34,560	3,400	3,500	3,600	3,700	3,800	3,900
35,640	3,500	3,600	3,700	3,800	3,900	4,000
36,720	3,600	3,700	3,800	3,900	4,000	4,100
37,800	3,700	3,800	3,900	4,000	4,100	4,200
38,880	3,800	3,900	4,000	4,100	4,200	4,300
39,960	3,900	4,000	4,100	4,200	4,300	4,400
41,040	4,000	4,100	4,200	4,300	4,400	4,500
42,120	4,100	4,200	4,300	4,400	4,500	4,600
43,200	4,200	4,300	4,400	4,500	4,600	4,700
44,280	4,300	4,400	4,500	4,600	4,700	4,800
45,360	4,400	4,500	4,600	4,700	4,800	4,900
46,440	4,500	4,600	4,700	4,800	4,900	5,000
47,520	4,600	4,700	4,800	4,900	5,000	5,100
48,600	4,700	4,800	4,900	5,000	5,100	5,200
49,680	4,800	4,900	5,000	5,100	5,200	5,300
50,760	4,900	5,000	5,100	5,200	5,300	5,400
51,840	5,000	5,100	5,200	5,300	5,400	5,500
52,920	5,100	5,200	5,300	5,400	5,500	5,600
54,000	5,200	5,300	5,400	5,500	5,600	5,700
55,080	5,300	5,400	5,500	5,600	5,700	5,800
56,160	5,400	5,500	5,600	5,700	5,800	5,900
57,240	5,500	5,600	5,700	5,800	5,900	6,000
58,320	5,600	5,700	5,800	5,900	6,000	6,100
59,400	5,700	5,800	5,900	6,000	6,100	6,200
60,480	5,800	5,900	6,000	6,100	6,200	6,300
61,560	5,900	6,000	6,100	6,200	6,300	6,400
62,640	6,000	6,100	6,200	6,300	6,400	6,500
63,720	6,100	6,200	6,300	6,400	6,500	6,600
64,800	6,200	6,300	6,400	6,500	6,600	6,700
65,880	6,300	6,400	6,500	6,600	6,700	6,800
66,960	6,400	6,500	6,600	6,700	6,800	6,900
68,040	6,500	6,600	6,700	6,800	6,900	7,000
69,120	6,600	6,700	6,800	6,900	7,000	7,100
70,200	6,700	6,800	6,900	7,000	7,100	7,200
71,280	6,800	6,900	7,000	7,100	7,200	7,300
72,360	6,900	7,000	7,100	7,200	7,300	7,400
73,440	7,000	7,100	7,200	7,300	7,400	7,500
74,520	7,100	7,200	7,300	7,400	7,500	7,600
75,600	7,200	7,300	7,400	7,500	7,600	7,700
76,680	7,300	7,400	7,500	7,600	7,700	7,800
77,760	7,400	7,500	7,600	7,700	7,800	7,900
78,840	7,500	7,600	7,700	7,800	7,900	8,000
79,920	7,600	7,700	7,800	7,900	8,000	8,100
81,000	7,700	7,800	7,900	8,000	8,100	8,200
82,080	7,800	7,900	8,000	8,100	8,200	8,300
83,160	7,900	8,000	8,100	8,200	8,300	8,400
84,240	8,000	8,100	8,200	8,300	8,400	8,500
85,320	8,100	8,200	8,300	8,400	8,500	8,600
86,400	8,200	8,300	8,400	8,500	8,600	8,700
87,480	8,300	8,400	8,500	8,600	8,700	8,800
88,560	8,400	8,500	8,600	8,700	8,800	8,900
89,640	8,500	8,600	8,700	8,800	8,900	9,000
90,720	8,600	8,700	8,800	8,900	9,000	9,100
91,800	8,700	8,800	8,900	9,000	9,100	9,200
92,880	8,800	8,900	9,000	9,100	9,200	9,300
93,960	8,900	9,000	9,100	9,200	9,300	9,400
95,040	9,000	9,100	9,200	9,300	9,400	9,500
96,120	9,100	9,200	9,300	9,400	9,500	9,600
97,200	9,200	9,300	9,400	9,500	9,600	9,700
98,280	9,300	9,400	9,500	9,600	9,700	9,800
99,360	9,400	9,500	9,600	9,700	9,800	9,900
100,440	9,500	9,600	9,700	9,800	9,900	10,000

TABLE 15

No. 49 SINGLE WIDTH SINGLE INLET FAN — TYPE FC
CIRCUM. = 12.83' WHEEL DIA. 49" OUTLET AREA = 13.09 SQ. FT.

STATIC PRESSURE ➡																				
CFM	Outlet Vel.	Tip Speed	RPM	1 1/8"	Tip Speed	RPM	1 1/4"	Tip Speed	RPM	3/8"	Tip Speed	RPM	1 1/2"	Tip Speed	RPM	5/8"				
10,472	800	1160	82	431	388	108	68													
11,781	900	1165	91	511	418	110	79	169	131	109										
13,090	1000	1165	91	661	450	113	95	171	133	125	162									
14,399	1100	1220	95	811	490	116	111	173	135	143	165	153	182	219	171	220				
15,708	1200	1290	100	961	531	119	131	176	137	166	180	154	202	219	171	244				
17,017	1300	1350	105	1181	577	123	152	179	141	193	205	156	232	220	173	268				
18,326	1400	1420	111	1381	635	127	179	183	143	216	204	159	258	225	173	302				
19,635	1500			1690	132	206	185	147	248	208	162	293	225	175	339					
20,944	1600			1755	137	231	190	151	281	212	165	325	229	178	372					
22,253	1700			1823	142	274	195	155	321	212	168	363	233	181	424					
23,562	1800			1890	147	315	205	161	364	221	173	402	237	185	471					
24,871	1900				2105	164	411	227	177	464	245	189	520							
26,180	2000				2162	169	464	233	181	520	247	193	572							
27,489	2200				2240	190	536	261	215	204	697									
30,107	2400				31416	2400			2580	201	712735	213	845							
STATIC PRESSURE ➡										1"							1 1/4"		1 1/2"	
15,708	1200				34"															
17,017	1300	2390	186	124																
18,326	1400	2415	188	352	2590	202	410	2765	215	458										
19,635	1500	2425	189	368	2600	203	494	2776	216	495										
20,944	1600	2455	191	424	2620	204	482	2776	216	538	3090	241	650							
22,253	1700	2495	194	468	2650	206	522	2800	218	584	3100	242	693							
23,562	1800	2540	198	520	2680	209	577	2835	221	631	3110	243	744	3380	263	874				
24,871	1900	2575	201	572	2720	212	631	2865	223	689	3125	245	811	3390	264	936				
26,180	2000	2620	204	624	2770	216	699	2900	226	751	3165	247	866	3420	266	1010				
27,489	2200	2710	211	719	2850	222	814	2995	233	890	3225	251	102	3460	269	113				
31,416	2400	2820	219	910	2940	229	970	3060	238	104	43300	257	119	3520	274	113				
34,034	2600	2930	228	108	3060	238	115	3155	245	112	2385	264	133	3580	279	115				
36,652	2800	3040	237	121	317	247	135	3270	254	143	3480	271	159	3670	286	117				
39,270	3000				337	259	149	3380	264	166	3580	279	181	3770	294	119				
41,888	3200				3420	256	159	3380	264	166	3580	279	181	3770	294	119				
44,506	3400							3510	274	119	3700	288	21	3883	312	22				
47,124	3600								3820	297	24	3990	311	25	7					
STATIC PRESSURE ➡										2"		2 1/4"		2 1/2"		3"				
23,562	1800	3660	285	10	2															
26,180	2000	3670	286	11	6	13020	395	13	0											
28,798	2200	3690	287	13	2	13930	306	14	5	14150	323	15	7							
31,416	2400	3750	292	15	2	13960	308	16	1	14175	325	17	9	14390	342	19				
34,034	2600	3820	297	16	9	14010	312	18	3	14215	328	19	8	14410	344	22				
36,652	2800	3885	302	19	4	14080	318	20	6	14375	333	22	3	14500	347	24				
39,270	3000	3960	308	21	7	14160	324	23	3	14430	338	25	1	14510	352	27				
41,888	3200	4050	315	24	6	14240	330	26	0	14410	344	28	2	14560	357	30				
44,506	3400	4150	323	27	7	14336	337	29	3	14485	349	31	4	14650	363	34				
47,124	3600	4255	332	30	8	14420	344	32	9	14580	357	35	2	14750	370	37				
49,742	3800	4360	341	35	6	14540	354	37	2	14685	365	39	1	14850	378	41				
52,360	4000	4550	354	39	5	14660	363	41	8	14820	376	43	7	14950	386	45				
54,978	4200	4650	363	43	4	14780	372	46	7	15000	385	47	4	15100	401	48				
57,596	4400	4750	372	47	3	14900	381	50	3	15120	394	51	2	15200	408	50				

TABLE 16

No. 54 SINGLE WIDTH SINGLE INLET FAN — TYPE FC
CIRCUM. = 14.14' WHEEL DIA. 54" OUTLET AREA = 15.9 SQ. FT.

STATIC PRESSURE ➡	1/8"	1/4"	3/8"	1/2"	5/8"		
CFM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM		
12,720	800 1060 75	521 388 98	83				
14,310	900 1105 78	62 1418 100	96 1690 119	1,331			
15,900	1000 1165 82	81 1450 102	1,15 1710 121	1,521 1960 138	1,971		
17,490	1100 1220 86	91 1497 106	1,35 1730 122	1,751 1965 139	2,221		
19,080	1200 1290 91	119 1530 108	1,60 1760 124	2,03 1980 140	2,451 2195 155		
20,670	1300 1350 95	143 1571 112	1,85 1790 127	2,35 2005 142	2,83 2205 156		
22,260	1400 1420 100	168 1635 116	2,18 1835 130	2,64 2040 147	3,15 2225 158		
23,850	1500		1,690 119	2,50 1885 133	3,01 2080 147	3,58 2255 159	
25,440	1600		1,755 124	2,92 1940 137	3,42 2120 150	3,95 2290 162	
27,030	1700		1,820 129	3,34 1995 141	3,91 2168 153	4,47 2330 165	
28,620	1800		1,890 134	3,84 2050 145	4,43 2210 156	5,00 2375 168	
30,210	1900			2,105 149	5,00 2270 160	5,65 2425 171	
31,800	2000			2,162 153	5,65 2330 165	6,35 2475 175	
33,390	2100				2,240 172	7,75 2615 185	
34,980	2200				2,580 182	9,60 2735 193	
36,570	2300						
38,160	2400						
39,750	2500						
41,340	2600						
42,930	2700						
44,520	2800						
46,110	2900						
47,700	3000						
49,290	3100						
50,880	3200						
52,470	3300						
54,060	3400						
55,650	3500						
57,240	3600						
58,830	3700						
60,420	3800						
62,010	3900						
63,600	4000						

All published ratings based on air at 70° F. and 29.92" barometric pressure, and on tests in accordance with N.A.F.M. test code.

TABLE 17

No. 60 SINGLE WIDTH SINGLE INLET FAN — TYPE FC
CIRCUM. = 15.71' WHEEL DIA. 60" OUTLET AREA = 19.635 SQ. FT.

STATIC PRESSURE ➡	1/8"		1/4"		3/8"		1/2"		5/8"	
CFM	OUTLET VFL.	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM
15,708	800	1060	67	64	1388	88	1,021			
17,672	900	1105	70	76	1418	90	1,191	1690	107	1,641
19,635	1000	1165	74	1,001	1450	92	1,421	1710	109	1,871
21,598	1100	1220	77	1,221	1497	95	1,671	1730	110	2,161
23,462	1200	1290	82	1,471	1530	97	1,971	1760	112	2,501
25,525	1300	1350	86	1,761	1571	100	2,291	1790	114	2,901
27,489	1400	1420	90	2,081	1635	104	2,681	1835	117	3,251
29,452	1500						1,690	107	3,091	1885
31,416	1600						1,755	111	3,591	1940
33,380	1700						1,820	116	4,121	1995
35,344	1800						1,890	120	4,731	2050
37,307	1900								2,105	134
39,270	2000								2,162	137
41,196	2100									
43,196	2200									
45,222	2300									
47,274	2400									
49,351	2500									
51,454	2600									
53,584	2700									
55,740	2800									
57,922	2900									
60,130	3000									
62,364	3100									
64,624	3200									
66,909	3300									
69,219	3400									
71,554	3500									
73,914	3600									
76,299	3700									
78,709	3800									
81,144	3900									
83,604	4000									
86,089	4100									
88,599	4200									
91,134	4300									
93,694	4400									
96,279	4500									
98,889	4600									
101,524	4700									
104,184	4800									
106,869	4900									
109,579	5000									
112,314	5100									
115,074	5200									
117,859	5300									
120,669	5400									
123,504	5500									
126,364	5600									
129,249	5700									
132,159	5800									
135,094	5900									
138,054	6000									
141,039	6100									
144,049	6200									
147,084	6300									
150,144	6400									
153,219	6500									
156,319	6600									
159,444	6700									
162,584	6800									
165,749	6900									
168,929	7000									
172,134	7100									
175,354	7200									
178,589	7300									
181,849	7400									
185,129	7500									
188,429	7600									
191,749	7700									
195,089	7800									
198,449	7900									
201,829	8000									
205,229	8100									
208,649	8200									
212,089	8300									
215,549	8400									
219,029	8500									
222,529	8600									
226,049	8700									
229,589	8800									
233,149	8900									
236,729	9000									
240,329	9100									
243,949	9200									
247,589	9300									
251,249	9400									
254,929	9500									
258,629	9600									
262,349	9700									
266,089	9800									
269,849	9900									
273,629	10000									
277,429	10100									
281,249	10200									
285,089	10300									
288,949	10400									
292,829	10500									
296,729	10600									
300,649	10700									
304,589	10800									
308,549	10900									
312,529	11000									
316,529	11100									
320,549	11200									
324,589	11300									
328,649	11400									
332,729	11500									
336,829	11600									
340,949	11700									
345,089	11800									
349,249	11900									
353,429	12000									
357,629	12100									
361,849	12200									
366,089	12300									
370,349	12400									
374,629	12500									
378,929	12600									
383,249	12700									
387,589	12800									
391,949	12900									
396,329	13000									
400,729	13100									
405,149	13200									
409,589	13300									
414,049	13400									
418,529	13500									
423,029	13600									
427,549	13700									
432,089	13800									
436,649	13900									
441,229	14000									
445,829	14100									
450,449	14200									
455,089	14300									
459,749	14400									
464,429	14500									
469,129	14600									
473,849	14700									
478,589	14800									
483,349	14900									
488,129	15000									
492,929	15100									
497,749	15200									
502,589	15300									
507,449	15400									
512,329	15500									
517,229	15600									
522,149	15700									
527,089	15800									
532,049	15900									
537,029	16000									
542,029	16100									
547,049	16200									
552,089	16300									
557,149	16400									
562,229	16500									
567,329	16600									
572,449	16700									
577,589	16800									
582,749	16900									
587,929	17000									
593,129	17100									
598,349	17200									
603,589	17300									
608,849	17400									
614,129	17500									
619,429	17600									
624,749	17700									
630,089	17800									
635,449	17900									
640,829	18000									
646,229	18100									
651,649	18200									
657,089	18300									
662,549	18400									
668,029	18500									
673,529	18600									
679,049	18700									
684,589	18800									
690,149	18900									
695,729	19000									
701,329	19100									
706,949	19200									
712,589	19300									
718,249	19400									
723,929	19500									
729,629	19600									
735,349	19700									
741,089	19800									
746,849	19900									
752,629	20000									

FC — SWSI

FC - SWSI

TABLE 18

No. 66 SINGLE WIDTH SINGLE INLET FAN — TYPE FC
CIRCUM. = 17.28' WHEEL DIA. 66" OUTLET AREA = 23.75 SQ. FT.

STATIC PRESSURE →	1/8"	1/4"	3/8"	1/2"	5/8"								
CFM	OUT. VTL.	PV	HP	RPM	PV	HP	RPM	PV	HP	RPM	PV	HP	
19,000	800	1060	62	76	1388	80	124						
21,375	900	1105	64	96	1418	82	148	1690	98	200			
23,750	1000	1165	67	120	1450	84	176	1710	99	228	1960	113	296
26,125	1100	1220	70	148	1497	86	204	1730	100	264	1965	114	332
28,500	1200	1290	74	180	1530	88	240	1760	102	304	1980	115	372
30,875	1300	1350	78	216	1577	91	280	1790	104	348	2005	116	420
33,250	1400	1420	82	252	1635	94	328	1835	106	400	2040	118	472
35,625	1500	1500	86	324	1690	98	376	1885	109	448	2080	120	536
38,000	1600	1570	90	380	1755	102	436	1940	112	516	2120	122	600
40,375	1700				1820	106	500	1995	115	592	2168	125	668
42,750	1800				1890	110	576	2050	118	668	2210	128	732
45,125	1900					122	752	2270	131	848	2425	140	948
47,500	2000					126	840	2330	135	948	2475	143	1033
52,250	2200												
57,000	2400												
28,500	1200												
30,875	1300	12390	138	592									
33,250	1400	12415	140	640	2590	150	744						
35,625	1500	12425	141	704	2600	151	812	2770	160	900			
38,000	1600	12455	142	730	2620	152	880	2776	161	976	3090	179	1118
40,375	1700	12495	144	860	2650	153	960	2800	162	1060	3100	180	1260
42,750	1800	12540	147	948	2680	155	1060	2835	164	1150	3110	180	1360
45,125	1900	12575	149	1040	2720	158	1150	2865	166	1260	3125	181	1480
47,500	2000	12620	152	1140	2770	161	1260	2900	168	1370	3165	183	1640
52,250	2200	12710	157	1370	2850	165	1490	2995	173	1620	3225	187	1840
57,000	2400	12820	163	1660	2940	170	1780	3060	177	1900	3300	191	2180
61,750	2600	12930	170	1980	3060	177	2100	3155	183	2230	3385	196	2500
66,500	2800	13040	176	2300	3170	183	2480	3270	189	2620	3480	201	2900
71,250	3000				3280	190	2880	3380	195	3030	3580	207	3300
76,000	3200					3510	320	3500	207	3300	3770	218	3600
80,750	3400												
85,500	3600												
28,500	1200												
30,875	1300	12390	138	592									
33,250	1400	12415	140	640	2590	150	744						
35,625	1500	12425	141	704	2600	151	812	2770	160	900			
38,000	1600	12455	142	730	2620	152	880	2776	161	976	3090	179	1118
40,375	1700	12495	144	860	2650	153	960	2800	162	1060	3100	180	1260
42,750	1800	12540	147	948	2680	155	1060	2835	164	1150	3110	180	1360
45,125	1900	12575	149	1040	2720	158	1150	2865	166	1260	3125	181	1480
47,500	2000	12620	152	1140	2770	161	1260	2900	168	1370	3165	183	1640
52,250	2200	12710	157	1370	2850	165	1490	2995	173	1620	3225	187	1840
57,000	2400	12820	163	1660	2940	170	1780	3060	177	1900	3300	191	2180
61,750	2600	12930	170	1980	3060	177	2100	3155	183	2230	3385	196	2500
66,500	2800	13040	176	2300	3170	183	2480	3270	189	2620	3480	201	2900
71,250	3000				3280	190	2880	3380	195	3030	3580	207	3300
76,000	3200					3510	320	3500	207	3300	3770	218	3600
80,750	3400												
85,500	3600												
28,500	1200												
30,875	1300	12390	138	592									
33,250	1400	12415	140	640	2590	150	744						
35,625	1500	12425	141	704	2600	151	812	2770	160	900			
38,000	1600	12455	142	730	2620	152	880	2776	161	976	3090	179	1118
40,375	1700	12495	144	860	2650	153	960	2800	162	1060	3100	180	1260
42,750	1800	12540	147	948	2680	155	1060	2835	164	1150	3110	180	1360
45,125	1900	12575	149	1040	2720	158	1150	2865	166	1260	3125	181	1480
47,500	2000	12620	152	1140	2770	161	1260	2900	168	1370	3165	183	1640
52,250	2200	12710	157	1370	2850	165	1490	2995	173	1620	3225	187	1840
57,000	2400	12820	163	1660	2940	170	1780	3060	177	1900	3300	191	2180
61,750	2600	12930	170	1980	3060	177	2100	3155	183	2230	3385	196	2500
66,500	2800	13040	176	2300	3170	183	2480	3270	189	2620	3480	201	2900
71,250	3000				3280	190	2880	3380	195	3030	3580	207	3300
76,000	3200					3510	320	3500	207	3300	3770	218	3600
80,750	3400												
85,500	3600												
28,500	1200												
30,875	1300	12390	138	592									
33,250	1400	12415	140	640	2590	150	744						
35,625	1500	12425	141	704	2600	151	812	2770	160	900			
38,000	1600	12455	142	730	2620	152	880	2776	161	976	3090	179	1118
40,375	1700	12495	144	860	2650	153	960	2800	162	1060	3100	180	1260
42,750	1800	12540	147	948	2680	155	1060	2835	164	1150	3110	180	1360
45,125	1900	12575	149	1040	2720	158	1150	2865	166	1260	3125	181	1480
47,500	2000	12620	152	1140	2770	161	1260	2900	168	1370	3165	183	1640
52,250	2200	12710	157	1370	2850	165	1490	2995	173	1620	3225	187	1840
57,000	2400	12820	163	1660	2940	170	1780	3060	177	1900	3300	191	2180
61,750	2600	12930	170	1980	3060	177	2100	3155	183	2230	3385	196	2500
66,500	2800	13040	176	2300	3170	183	2480	3270	189	2620	3480	201	2900
71,250	3000				3280	190	2880	3380	195	3030	3580	207	3300
76,000	3200					3510	320	3500	207	3300	3770	218	3600
80,750	3400												
85,500	3600												
28,500	1200												
30,875	1300	12390	138	592									
33,250	1400	12415	140	640	2590	150	744						
35,625	1500	12425	141	704	2600	151	812	2770	160	900			
38,000	1600	12455	142	730	2620	152	880	2776	161	976	3090	179	1118
40,375	1700	12495	144	860	2650	153	960	2800	162	1060	3100	180	1260
42,750	1800	12540	147	948	2680	155	1060	2835	164	1150	3110	180	1360
45,125	1900	12575	149	1040	2720	158	1150	2865	166	1260	3125	181	1480
47,500	2000	12620	152	1140	2770	161	1260	2900	168	1370	3165	183	1640
52,250	2200	12710	157	1370	2850	165	1490	2995	173	1620	3225	187	1840
57,000	2400	12820	163	1660	2940	170	1780	3060	177	1900	3300	191	2180
61,750	2600	12930	170	1980	3060	177	2100	3155	183	2230	3385	196	2500
66,500	2800	13040	176	2300	3170	183	2480	3270	189	2620	3480	201	2900
71,250	3000				3280	190	2880	3380	195	3030	3580	207	3300
76,000	3200					3510	320	3500	207	3300	3770	218	3600
80,750	3400												
85,500	3600												
28,500	1200												
30,875	1300	12390	138	592									
33,250	1400	12415	140	640	2590	150	744						
35,625	1500	12425	141	704	2600	151	812	2770	160	900			
38,000	1600	12455	142	730	2620	152	880	2776	161	976	3090	179	1118
40,375	1700	12495	144	860	2650	153	960	2800	162	1060	3100	180	1260
42,750	1800	12540											

TABLE 19

No. 8 DOUBLE WIDTH DOUBLE INLET FAN — TYPE FC
CIRCUM. = 2.09' WHEEL DIA. 8" OUTLET AREA = .637 SQ. FT.

STATIC PRESSURE	1 1/8"	1 1/4"	3/8"	1 1/2"	5/8"
CFM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM
510	800	1090	520	.02	
573	900	1142	545	.03	11445
637	1000	1200	572	.04	11801
701	1100	1260	601	.04	11851
764	1200	1322	631	.05	11960
830	1300	1400	668	.06	11635
893	1400	1485	695	.08	11690
955	1500	1530	730	.09	11745
1020	1600	1598	762	.11	11808
1083	1700	1674	799	.12	11875
1146	1800	1745	832	.15	11935
1210	1900				12000
1274	2000				12075
1402	2200				12365
1530	2400				12510
STATIC PRESSURE	3/4"	1"	1 1/4"	1 1/2"	1 3/4"
830	1300	2430	1155	17	
893	1400	2440	1165	19	2620
955	1500	2470	1180	20	2635
1020	1600	2505	1198	23	2655
1083	1700	2545	1220	25	2680
1146	1800	2585	1236	27	2725
1210	1900	2640	1260	30	2775
1274	2000	2695	1288	33	2820
1402	2200	2800	1339	40	2925
1530	2400	2920	1395	48	3035
1660	2600	3030	1448	57	3145
1786	2800	3150	1503	67	3260
1911	3000	3270	1561	79	3390
2040	3200				3520
2166	3400				3620
2292	3600				3745
STATIC PRESSURE	1 3/4"	2"	2 1/4"	2 1/2"	3"
1274	2000	3710	1765	62	
1402	2200	3740	1785	70	3970
1530	2400	3800	1815	79	4000
1660	2600	3845	1846	90	4060
1786	2800	3895	1888	102	4130
1911	3000	4090	1935	114	4215
2040	3200	4150	1980	129	4310
2166	3400	4255	2030	145	4415
2292	3600	4360	2085	162	4525
2420	3800	4480	2140	182	4640
2548	4000	4600	2195	204	4760

All published ratings based on air at 70° F. and 29.92" barometric pressure, and on tests in accordance with N.A.F.M. test code.

FC — DWDI

TABLE 20

No. 10 DOUBLE WIDTH DOUBLE INLET FAN — TYPE FC
CIRCUM. = 2.61' WHEEL DIA. 10" OUTLET AREA = .985 SQ. FT.

STATIC PRESSURE	1 1/8"	1 1/4"	3/8"	1 1/2"	5/8"
CFM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM
768	800	1090	417	.03	11410
886	900	1142	437	.04	11445
985	1000	1200	458	.05	11480
1085	1100	1260	482	.07	11525
1180	1200	1322	506	.08	11580
1280	1300	1400	535	.10	11635
1379	1400	1485	567	.12	11690
1477	1500	1530	585	.14	11745
1576	1600	1598	610	.16	11808
1675	1700	1674	640	.19	11875
1773	1800	1745	667	.23	11935
1871	1900				12000
1970	2000				12075
2167	2200				12365
2364	2400				12510
STATIC PRESSURE	3/4"	1"	1 1/4"	1 1/2"	1 3/4"
1280	1300	2420	925	27	
1379	1400	2440	932	29	2620
1477	1500	2470	944	32	2635
1576	1600	2505	959	35	2655
1675	1700	2545	972	39	2680
1773	1800	2585	986	43	2725
1871	1900	2640	1009	47	2775
1970	2000	2695	1030	51	2820
2167	2200	2800	1070	61	2925
2364	2400	2920	1114	73	3035
2561	2600	3030	1158	87	3145
2758	2800	3150	1204	104	3260
2955	3000	3270	1250	122	3390
3152	3200				3520
3349	3400				3620
3546	3600				3745
STATIC PRESSURE	1 3/4"	2"	2 1/4"	2 1/2"	3"
1970	2000	3710	1418	96	
2167	2200	3740	1430	108	3970
2364	2400	3800	1452	123	4000
2561	2600	3865	1477	138	4060
2758	2800	3955	1511	157	4130
2955	3000	4050	1549	176	4215
3152	3200	4150	1587	198	4310
3349	3400	4255	1628	224	4415
3546	3600	4360	1666	251	4525
3742	3800	4480	1711	281	4640
3940	4000	4600	1750	313	4760

FC - DWDI

TABLE 22

No. 15 DOUBLE WIDTH DOUBLE INLET FAN — TYPE FC
CIRCUM. = 3.92' WHEEL DIA. 15" OUTLET AREA = 2.18 SQ. FT.

STATIC PRESSURE	1/8"	1/4"	3/8"	1/2"	5/8"								
CFM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM								
1745	800	1090	278	08	1410	359	12	1710	436	21			
1962	900	1142	292	09	1445	368	15	1765	450	24	11970	502	31
2180	1000	1200	306	11	1480	378	18	1785	460	27	11980	505	34
2400	1100	1260	321	14	1525	389	20	1795	450	30	20005	511	36
2618	1200	1322	337	17	1580	402	23	1800	459	30	20005	511	36
2835	1300	1400	357	22	1635	417	28	1845	470	35	20400	520	42
3050	1400	1485	379	27	1690	431	32	1890	482	40	20800	530	48
3270	1500	1530	390	31	1745	445	38	1945	495	44	21200	540	53
3490	1600	1598	407	36	1808	461	42	1995	509	51	21800	556	59
3708	1700	1674	427	42	1875	478	50	2055	523	58	22300	568	67
3925	1800	1745	445	50	1935	493	58	2120	540	65	22900	584	75
4145	1900				2000	510	65	2180	556	73	23400	597	83
4360	2000				2075	529	75	2240	572	83	2405	614	92
4580	2100							2305	601	95	2520	643	114
4800	2200							2365	631	105	2645	675	124
5020	2300							2425	661	115	2770	709	134
5235	2400							2485	691	125	2900	745	144
5450	2500							2545	721	135	3030	781	154
5670	2600							2605	751	145	3160	817	164
5890	2700							2665	781	155	3290	853	174
6110	2800							2725	811	165	3420	889	184
6330	2900							2785	841	175	3550	925	194
6550	3000							2845	871	185	3680	961	204
6770	3100							2905	901	195	3810	997	214
6990	3200							2965	931	205	3940	1033	224
7210	3300							3025	961	215	4070	1069	234
7430	3400							3085	991	225	4200	1105	244
7650	3500							3145	1021	235	4330	1141	254
7870	3600							3205	1051	245	4460	1177	264
8090	3700							3265	1081	255	4590	1213	274
8310	3800							3325	1111	265	4720	1249	284
8530	3900							3385	1141	275	4850	1285	294
8750	4000							3445	1171	285	4980	1321	304
8970	4100							3505	1201	295	5110	1357	314
9190	4200							3565	1231	305	5240	1393	324
9410	4300							3625	1261	315	5370	1429	334
9630	4400							3685	1291	325	5500	1465	344
9850	4500							3745	1321	335	5630	1501	354
10070	4600							3805	1351	345	5760	1537	364
10290	4700							3865	1381	355	5890	1573	374
10510	4800							3925	1411	365	6020	1609	384
10730	4900							3985	1441	375	6150	1645	394
10950	5000							4045	1471	385	6280	1681	404
11170	5100							4105	1501	395	6410	1717	414
11390	5200							4165	1531	405	6540	1753	424
11610	5300							4225	1561	415	6670	1789	434
11830	5400							4285	1591	425	6800	1825	444
12050	5500							4345	1621	435	6930	1861	454
12270	5600							4405	1651	445	7060	1897	464
12490	5700							4465	1681	455	7190	1933	474
12710	5800							4525	1711	465	7320	1969	484
12930	5900							4585	1741	475	7450	2005	494
13150	6000							4645	1771	485	7580	2041	504
13370	6100							4705	1801	495	7710	2077	514
13590	6200							4765	1831	505	7840	2113	524
13810	6300							4825	1861	515	7970	2149	534
14030	6400							4885	1891	525	8100	2185	544
14250	6500							4945	1921	535	8230	2221	554
14470	6600							5005	1951	545	8360	2257	564
14690	6700							5065	1981	555	8490	2293	574
14910	6800							5125	2011	565	8620	2329	584
15130	6900							5185	2041	575	8750	2365	594
15350	7000							5245	2071	585	8880	2401	604
15570	7100							5305	2101	595	9010	2437	614
15790	7200							5365	2131	605	9140	2473	624
16010	7300							5425	2161	615	9270	2509	634
16230	7400							5485	2191	625	9400	2545	644
16450	7500							5545	2221	635	9530	2581	654
16670	7600							5605	2251	645	9660	2617	664
16890	7700							5665	2281	655	9790	2653	674
17110	7800							5725	2311	665	9920	2689	684
17330	7900							5785	2341	675	10050	2725	694
17550	8000							5845	2371	685	10180	2761	704
17770	8100							5905	2401	695	10310	2797	714
17990	8200							5965	2431	705	10440	2833	724
18210	8300							6025	2461	715	10570	2869	734
18430	8400							6085	2491	725	10700	2905	744
18650	8500							6145	2521	735	10830	2941	754
18870	8600							6205	2551	745	10960	2977	764
19090	8700							6265	2581	755	11090	3013	774
19310	8800							6325	2611	765	11220	3049	784
19530	8900							6385	2641	775	11350	3085	794
19750	9000							6445	2671	785	11480	3121	804
19970	9100							6505	2701	795	11610	3157	814
20190	9200							6565	2731	805	11740	3193	824
20410	9300							6625	2761	815	11870	3229	834
20630	9400							6685	2791	825	12000	3265	844
20850	9500							6745	2821	835	12130	3301	854
21070	9600							6805	2851	845	12260	3337	864
21290	9700							6865	2881	855	12390	3373	874
21510	9800							6925	2911	865	12520	3409	884
21730	9900							6985	2941	875	12650	3445	894
21950	10000							7045	2971	885	12780	3481	904
22170	10100							7105	3001	895	12910	3517	914
22390	10200							7165	3031	905	13040	3553	924
22610	10300							7225	3061	915	13170	3589	934
22830	10400							7285	3091	925	13300	3625	944
23050	10500							7345	3121	935	13430	3661	954
23270	10600							7405	3151	945	13560	3697	964
23490	10700							7465	3181	955	13690	3733	974
23710	10800							7525	3211	965	13820	3769	984
23930	10900							7585	3241	975	13950	3805	994
24150	11000							7645	3271	985	14080	3841	1004
24370	11100							7705	3301	995	14210	3877	1014
24590	11200							7765	3331	1005	14340	3913	1024
24810	11300							7825	3361	1015	14470	3949	1034
25030	11400							7885	3391	1025	14600	3985	1044
25250	11500							7945	3421	1035	14730	4021	1054
25470	11600							8005	3451	1045	14860	4057	1064
25690	11700							8065	3481	1055	14990	4093	1074
25910	11800							8125	3511	1065	15120	4129	1084
26130	11900							8185	3541	1075	15250	4165	1094
26350	12000							8245	3571	1085	15380	4201	1104
26570	12100							8305	3601	1095	15510	4237	1114
26790	12200							8365	3631	1105	15640	4273	1124
27010	12300							8425	3661	1115	15770	4309	1134
27230</													

TABLE 23

No. 18 DOUBLE WIDTH DOUBLE INLET FAN — TYPE FC
CIRCUM. = 4.71' WHEEL DIA. 18" OUTLET AREA = 3.12 SQ. FT.

STATIC PRESSURE ➤	1/8"			1/4"			3/8"			1/2"			5/8"		
	CFM	OUTLET VEL.	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	
2.496	800	1142	231	12	1441	299	17								
2.808	900	1190	243	14	1445	307	21	1710	363	30					
3.120	1000	1260	255	16	1480	314	26	1725	367	34	1970	418	44		
3.432	1100	1320	267	20	1525	324	29	1765	375	39	1980	420	48	2180	
3.744	1200	1382	281	25	1580	335	33	1800	382	43	2005	426	52	2205	
4.056	1300	1400	297	32	1635	347	40	1845	392	50	2040	431	60	2240	
4.368	1400	1485	316	39	1690	359	46	1890	401	57	2080	442	69	2265	
4.680	1500	1530	325	45	1745	370	54	1945	413	63	2120	450	76	2300	
4.992	1600	1598	339	52	1808	384	60	1995	424	73	2180	463	85	2350	
5.304	1700	1674	356	60	1875	398	72	2055	436	83	2230	473	96	2395	
5.616	1800	1745	370	72	1935	411	83	2120	450	93	2290	486	108	2440	
5.928	1900				2000	425	94	2180	463	105	2340	496	119	2490	
6.240	2000				2075	441	108	2240	475	120	2405	511	132	2550	
6.552	2200							2365	503	132	2520	535	144	2660	
6.864	2400							2501	531	148	2645	562	160	2780	
STATIC PRESSURE ➤	3/4"			7/8"			1"			1 1/4"			1 1/2"		
4.056	1300	2420	514	85											
4.368	1400	2420	518	93	2620	556	107								
4.680	1500	2470	525	103	2635	560	116	2795	593	131					
4.992	1600	2505	532	113	2655	564	125	2810	597	141	3120	663	172		
5.304	1700	2545	540	124	2680	571	139	2840	604	155	3140	667	187		
5.616	1800	2585	549	135	2725	578	151	2875	610	168	3155	670	202	3400	
5.928	1900	2640	561	150	2775	589	164	2910	618	181	3165	672	215	3440	
6.240	2000	2695	572	164	2820	599	180	2950	626	192	3200	679	230	3455	
6.552	2200	2800	595	196	2925	621	212	3045	647	230	3265	693	268	3515	
6.864	2400	2920	620	218	3035	644	232	3155	670	251	3365	715	310	3585	
7.176	2600	3030	643	240	3145	668	257	3260	692	276	3460	735	356	3655	
7.488	2800	3150	669	273	3260	692	300	3380	718	309	3550	754	410	3760	
7.800	3000	3270	694	312	3390	720	340	3493	742	343	3665	778	475	3868	
8.112	3200	3420	720	354	3520	747	384	3620	768	384	3785	804	540	3975	
8.424	3400				3520	747	420	3745	795	420	3800	828	615	4080	
8.736	3600							3745	795	456	3900	856	692	4200	
9.048	3800										4030	856	768	4320	
STATIC PRESSURE ➤	1 3/4"			2"			2 1/4"			2 1/2"			3"		
6.240	2000	3710	790	310											
6.552	2200	3740	794	345	3970	843	388	4195	889	430					
6.864	2400	3800	807	390	4006	851	430	4215	895	475	4420	938	525		
7.176	2600	3865	820	442	4060	862	490	4260	904	530	4460	947	580	4850	
7.488	2800	3955	840	500	4145	880	555	4335	920	594	4510	957	645	4890	
7.800	3000	4050	860	563	4215	895	592	4400	931	640	4585	971	715	4910	
8.112	3200	4150	881	635	4350	923	690	4490	953	740	4660	989	790	5000	
8.424	3400	4255	903	715	4415	937	770	4575	972	820	4740	1008	870	5070	
8.736	3600	4360	926	800	4525	961	850	4680	994	915	4840	1027	970	5150	
9.048	3800	4480	951	900	4640	985	960	4800	1019	1020	4950	1050	108	5250	
9.360	4000	4600	976	1000	4760	1011	1100	4910	1042	1112	5060	1073	119	5340	

FC - DWDI

TABLE 25

No. 24 DOUBLE WIDTH DOUBLE INLET FAN — TYPE FC
CIRCUM. = 6.28' WHEEL DIA. 24" OUTLET AREA = 8.228 SQ. FT.

STATIC PRESSURE →	1/8"	1/4"	3/8"	1/2"	5/8"
CFM	Tip Vel.	Tip Speed	Tip Speed	Tip Speed	Tip Speed
4,840	800	1050	1671	2011	2201
5,445	900	1090	1741	2061	2251
6,050	1000	1150	1831	2131	2311
6,655	1100	1210	1931	2231	2411
7,260	1200	1260	2001	2301	2481
7,865	1300	1340	2131	2451	2611
8,460	1400	1400	2231	2561	2711
9,065	1500	1500	2311	2661	2811
9,680	1600	1600	2391	2731	2881
10,285	1700	1700	2461	2801	2951
10,890	1800	1800	2541	2881	3021
11,495	1900	1900	2611	2951	3091
12,100	2000	2000	2691	3021	3161
12,705	2100	2100	2761	3091	3231
13,310	2200	2200	2841	3161	3301
13,915	2300	2300	2911	3231	3371
14,520	2400	2400	2991	3301	3441
15,125	2500	2500	3061	3371	3511
15,730	2600	2600	3141	3441	3581
16,335	2700	2700	3211	3511	3651
16,940	2800	2800	3291	3581	3721
17,545	2900	2900	3361	3651	3791
18,150	3000	3000	3441	3721	3861
18,755	3100	3100	3511	3791	3931
19,360	3200	3200	3591	3861	4001
19,965	3300	3300	3661	3931	4071
20,570	3400	3400	3741	4001	4141
21,175	3500	3500	3811	4071	4211
21,780	3600	3600	3891	4141	4281
22,385	3700	3700	3961	4211	4351
22,990	3800	3800	4041	4281	4421
23,595	3900	3900	4111	4351	4491
24,200	4000	4000	4191	4421	4561
24,805	4100	4100	4261	4491	4631
25,410	4200	4200	4341	4561	4701
26,015	4300	4300	4411	4631	4771
26,620	4400	4400	4491	4701	4841
27,225	4500	4500	4561	4771	4911
27,830	4600	4600	4641	4841	4981
28,435	4700	4700	4711	4911	5051
29,040	4800	4800	4791	4981	5121
29,645	4900	4900	4861	5051	5191
30,250	5000	5000	4941	5121	5261
30,855	5100	5100	5011	5191	5331
31,460	5200	5200	5091	5261	5401
32,065	5300	5300	5161	5331	5471
32,670	5400	5400	5241	5401	5541
33,275	5500	5500	5311	5471	5611
33,880	5600	5600	5391	5541	5681
34,485	5700	5700	5461	5611	5751
35,090	5800	5800	5541	5681	5821
35,695	5900	5900	5611	5751	5891
36,300	6000	6000	5691	5821	5961
36,905	6100	6100	5761	5891	6031
37,510	6200	6200	5841	5961	6101
38,115	6300	6300	5911	6031	6171
38,720	6400	6400	5991	6101	6241
39,325	6500	6500	6061	6171	6311
39,930	6600	6600	6141	6241	6381
40,535	6700	6700	6211	6311	6451
41,140	6800	6800	6291	6381	6521
41,745	6900	6900	6361	6451	6591
42,350	7000	7000	6441	6521	6661
42,955	7100	7100	6511	6591	6731
43,560	7200	7200	6591	6661	6801
44,165	7300	7300	6661	6731	6871
44,770	7400	7400	6741	6801	6941
45,375	7500	7500	6811	6871	7011
45,980	7600	7600	6891	6941	7081
46,585	7700	7700	6961	7011	7151
47,190	7800	7800	7041	7081	7221
47,795	7900	7900	7111	7151	7291
48,400	8000	8000	7191	7221	7361
49,005	8100	8100	7261	7291	7431
49,610	8200	8200	7341	7361	7501
50,215	8300	8300	7411	7431	7571
50,820	8400	8400	7491	7501	7641
51,425	8500	8500	7561	7571	7711
52,030	8600	8600	7641	7641	7781
52,635	8700	8700	7711	7711	7851
53,240	8800	8800	7791	7781	7921
53,845	8900	8900	7861	7851	7991
54,450	9000	9000	7941	7921	8061
55,055	9100	9100	8011	7991	8131
55,660	9200	9200	8091	8061	8201
56,265	9300	9300	8161	8131	8271
56,870	9400	9400	8241	8201	8341
57,475	9500	9500	8311	8271	8411
58,080	9600	9600	8391	8341	8481
58,685	9700	9700	8461	8411	8551
59,290	9800	9800	8541	8481	8621
59,895	9900	9900	8611	8551	8691
60,500	10000	10000	8691	8621	8761
61,105	10100	10100	8761	8691	8831
61,710	10200	10200	8841	8761	8901
62,315	10300	10300	8911	8831	8971
62,920	10400	10400	8991	8901	9041
63,525	10500	10500	9061	8971	9111
64,130	10600	10600	9141	9041	9181
64,735	10700	10700	9211	9111	9251
65,340	10800	10800	9291	9181	9321
65,945	10900	10900	9361	9251	9391
66,550	11000	11000	9441	9321	9461
67,155	11100	11100	9511	9391	9531
67,760	11200	11200	9591	9461	9601
68,365	11300	11300	9661	9531	9671
68,970	11400	11400	9741	9601	9741
69,575	11500	11500	9811	9671	9811
70,180	11600	11600	9891	9741	9881
70,785	11700	11700	9961	9811	9951
71,390	11800	11800	10041	9881	10021
71,995	11900	11900	10111	9951	10091
72,600	12000	12000	10191	10021	10161
73,205	12100	12100	10261	10091	10231
73,810	12200	12200	10341	10161	10301
74,415	12300	12300	10411	10231	10371
75,020	12400	12400	10491	10301	10441
75,625	12500	12500	10561	10371	10511
76,230	12600	12600	10641	10441	10581
76,835	12700	12700	10711	10511	10651
77,440	12800	12800	10791	10581	10721
78,045	12900	12900	10861	10651	10791
78,650	13000	13000	10941	10721	10861
79,255	13100	13100	11011	10791	10931
79,860	13200	13200	11091	10861	11001
80,465	13300	13300	11161	10931	11071
81,070	13400	13400	11241	11001	11141
81,675	13500	13500	11311	11071	11211
82,280	13600	13600	11391	11141	11281
82,885	13700	13700	11461	11211	11351
83,490	13800	13800	11541	11281	11421
84,095	13900	13900	11611	11351	11491
84,700	14000	14000	11691	11421	11561
85,305	14100	14100	11761	11491	11631
85,910	14200	14200	11841	11561	11701
86,515	14300	14300	11911	11631	11771
87,120	14400	14400	11991	11701	11841
87,725	14500	14500	12061	11771	11911
88,330	14600	14600	12141	11841	11981
88,935	14700	14700	12211	11911	12051
89,540	14800	14800	12291	11981	12121
90,145	14900	14900	12361	12051	12191
90,750	15000	15000	12441	12121	12261
91,355	15100	15100	12511	12191	12331
91,960	15200	15200	12591	12261	12401
92,565	15300	15300	12661	12331	12471
93,170	15400	15400	12741	12401	12541
93,775	15500	15500	12811	12471	12611
94,380	15600	15600	12891	12541	12681
94,985	15700	15700	12961	12611	12751
95,590	15800	15800	13041	12681	12821
96,195	15900	15900	13111	12751	12891
96,800	16000	16000	13191	12821	12961
97,405	16100	16100	13261	12891	13031
98,010	16200	16200	13341	12961	13101
98,615	16300	16300	13411	13031	13171
99,220	16400	16400	13491	13101	13241
99,825	16500	16500	13561	13171	13311
100,430	16600	16600	13641	13241	13381
101,035	16700	16700	13711	13311	13451
101,640	16800	16800	13791	13381	13521
102,245	16900	16900	13861	13451	13591
102,850	17000	17000	13941	13521	13661
103,455	17100	17100	14011	13591	13731
104,060	17200	17200	14091	13661	13801
104,665	17300	17300	14161	13731	13871
105,270	17400	17400	14241	13801	13941
105,875	17500	17500	14311	13871	14011
106,480	17600	17600	14391	13941	14081
107,085	17700	17700	14461	14011	14151
107,690	17800	17800	14541	14081	14221
108,295	17900	17900	14611	14151	14291
108,900	18000	18000	14691	14221	14361
109,505	18100	18100	14761	14291	14431
110,110	18200	18200	14841	14361	14501
110,715	18300	18300	14911	14431	14571
111,320	18400	18400	14991	14501	14641
111,925	18500	18500	15061	14571	14711
112,530	18600	18600	15141	14641	14781
113,135	18700	18700	15211	14711	14851
113,740	18800	18800	15291	14781	14921
114,345	18900	18900	15361	14851	14991
114,950	19000	19000	15441	14921	15061
115,555	19100	19100	15511	14991	15131
116,160	19200	19200	15591	15061	15201
116,765	19300	19300	15661	15131	15271
117,370	19400	1			

TABLE 28

No. 33 DOUBLE WIDTH DOUBLE INLET FAN — TYPE FC
CIRCUM. = 8.65' WHEEL DIA. 33" OUTLET AREA = 11.00 SQ. FT.

STATIC PRESSURE	1/8"		1/4"		3/8"		1/2"		5/8"	
	OUTLET VEL. CFM	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM
7.400	800	1050	121	38	1385	160	60	1400	162	73
8.325	900	1090	131	40	1400	166	64	1435	166	67
9.250	1000	1150	141	42	1470	170	67	1470	170	67
10.175	1100	1210	146	44	1540	174	70	1540	174	70
11.100	1200	1260	151	46	1610	178	73	1610	178	73
12.025	1300	1340	155	48	1680	182	76	1680	182	76
12.950	1400	1400	162	50	1750	186	79	1750	186	79
13.875	1500	1460	167	52	1820	190	82	1820	190	82
14.800	1600	1520	172	54	1890	194	85	1890	194	85
15.725	1700	1580	177	56	1960	198	88	1960	198	88
16.650	1800	1640	182	58	2030	202	91	2030	202	91
17.575	1900	1700	187	60	2100	206	94	2100	206	94
18.500	2000	1760	192	62	2170	210	97	2170	210	97
19.425	2100	1820	197	64	2240	214	100	2240	214	100
20.350	2200	1880	202	66	2310	218	103	2310	218	103
21.275	2300	1940	207	68	2380	222	106	2380	222	106
22.200	2400	2000	212	70	2450	226	109	2450	226	109
23.125	2500	2060	217	72	2520	230	112	2520	230	112
24.050	2600	2120	222	74	2590	234	115	2590	234	115
24.975	2700	2180	227	76	2660	238	118	2660	238	118
25.900	2800	2240	232	78	2730	242	121	2730	242	121
26.825	2900	2300	237	80	2800	246	124	2800	246	124
27.750	3000	2360	242	82	2870	250	127	2870	250	127
28.675	3100	2420	247	84	2940	254	130	2940	254	130
29.600	3200	2480	252	86	3010	258	133	3010	258	133
30.525	3300	2540	257	88	3080	262	136	3080	262	136
31.450	3400	2600	262	90	3150	266	139	3150	266	139
32.375	3500	2660	267	92	3220	270	142	3220	270	142
33.300	3600	2720	272	94	3290	274	145	3290	274	145
34.225	3700	2780	277	96	3360	278	148	3360	278	148
35.150	3800	2840	282	98	3430	282	151	3430	282	151
36.075	3900	2900	287	100	3500	286	154	3500	286	154
37.000	4000	2960	292	102	3570	290	157	3570	290	157

TABLE 27

No. 30 DOUBLE WIDTH DOUBLE INLET FAN — TYPE FC
CIRCUM. = 7.85' WHEEL DIA. 30" OUTLET AREA = 9.25 SQ. FT.

STATIC PRESSURE	1/8"		1/4"		3/8"		1/2"		5/8"	
	OUTLET VEL. CFM	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM
7.400	800	1050	134	31	1385	176	51	1400	176	51
8.325	900	1090	139	33	1400	181	54	1435	181	54
9.250	1000	1150	144	35	1470	185	57	1470	185	57
10.175	1100	1210	149	37	1540	189	60	1540	189	60
11.100	1200	1260	154	39	1610	193	63	1610	193	63
12.025	1300	1340	159	41	1680	197	66	1680	197	66
12.950	1400	1400	164	43	1750	201	69	1750	201	69
13.875	1500	1460	169	45	1820	205	72	1820	205	72
14.800	1600	1520	174	47	1890	209	75	1890	209	75
15.725	1700	1580	179	49	1960	213	78	1960	213	78
16.650	1800	1640	184	51	2030	217	81	2030	217	81
17.575	1900	1700	189	53	2100	221	84	2100	221	84
18.500	2000	1760	194	55	2170	225	87	2170	225	87
19.425	2100	1820	199	57	2240	229	90	2240	229	90
20.350	2200	1880	204	59	2310	233	93	2310	233	93
21.275	2300	1940	209	61	2380	237	96	2380	237	96
22.200	2400	2000	214	63	2450	241	99	2450	241	99
23.125	2500	2060	219	65	2520	245	102	2520	245	102
24.050	2600	2120	224	67	2590	249	105	2590	249	105
24.975	2700	2180	229	69	2660	253	108	2660	253	108
25.900	2800	2240	234	71	2730	257	111	2730	257	111
26.825	2900	2300	239	73	2800	261	114	2800	261	114
27.750	3000	2360	244	75	2870	265	117	2870	265	117
28.675	3100	2420	249	77	2940	269	120	2940	269	120
29.600	3200	2480	254	79	3010	273	123	3010	273	123
30.525	3300	2540	259	81	3080	277	126	3080	277	126
31.450	3400	2600	264	83	3150	281	129	3150	281	129
32.375	3500	2660	269	85	3220	285	132	3220	285	132
33.300	3600	2720	274	87	3290	289	135	3290	289	135
34.225	3700	2780	279	89	3360	293	138	3360	293	138
35.150	3800	2840	284	91	3430	297	141	3430	297	141
36.075	3900	2900	289	93	3500	301	144	3500	301	144
37.000	4000	2960	294	95	3570	305	147	3570	305	147

All published ratings based on air at 70° F. and 29.92" barometric pressure, and on tests in accordance with N.A.F.M. test code.

FC — DWDI

FC - DWDI

TABLE 30

No. 40 DOUBLE WIDTH DOUBLE INLET FAN — TYPE FC
CIRCUM. = 10.55' WHEEL DIA. 40 1/4" OUTLET AREA = 16.40 SQ. FT.

[illegible]

FC - DWDI

TABLE 29

No. 36 DOUBLE WIDTH DOUBLE INLET FAN — TYPE FC
 VACUUM — 9.42" WHEEL DIA. 36" OUTLET AREA — 13.1 SQ. FT.

STATIC PRESTRESS												1^H				1_2^H				1_3^H				1_4^H				1_5^H			
C/F		W/F		T/F		I/F		T/F		I/F		T/F		I/F		T/F		I/F		T/F		I/F		T/F		I/F		T/F		I/F	
W/F	T/F	W/F	T/F	W/F	T/F	W/F	T/F	W/F	T/F	W/F	T/F	W/F	T/F	W/F	T/F	W/F	T/F	W/F	T/F	W/F	T/F	W/F	T/F	W/F	T/F	W/F	T/F	W/F	T/F	W/F	T/F
11 800	800	1050	111	45	365	147	70																								
12 240	800	1090	110	56	1409	148	34																								
13 690	1000	1130	128	70	1435	152	1 071	700	180	1 734																					
14 060	1100	1221	128	68	14 70	150	1 20	1 725	102	1 741	1900	207	1 104																		
14 320	1200	1261	133	1 131	520	161	1 441	255	1061	1 621	1970	200	2 751	2100	232	3 67															
17 080	1300	1340	142	1 401	530	164	1 611	1700	169	2 101	1900	211	2 561	2200	233	3 39															
19 040	1400	1400	148	1 711	670	171	2 091	1630	193	2 411	2000	218	2 871	2210	234	3 34															
20 400	1500			1 670	177	2 331	1630	198	2 751	2000	218	3 231	2400	237	3 72																
21 760	1600			1715	182	2 721	1920	203	3 141	2100	223	3 651	2280	242	4 15																
23 120	1700			1790	190	3 191	1970	209	3 571	2140	327	4 111	2320	246	4 66																
24 480	1800			1850	198	3 601	2030	215	4 111	2100	231	4 631	2360	250	5 16																
25 840	1900			1920	203	4 211	2100	231	4 601	2240	237	5 121	2400	251	5 66																
27 200	2000			1980	210	4 931	2130	233	5 361	2300	244	5 591	2450	260	6 40																
28 560	2100			2270	241	6 671	2420	257	7 241	2540	269	7 76																			
32 640	2400			2340	254	8 301	2520	267	8 921	2650	281	9 30																			
STATIC PRESTRESS												1_2^H				1_3^H				1_4^H				1_5^H							
15 320	1300																														
17 680	1300	2190	254	3 45																											
19 040	1400	2400	255	1 84																											
20 400	1500	2420	257	4 27	2585	274	4 771	760	283	5 34																					
21 760	1600	2430	260	4 73	2610	277	5 281	770	294	5 90																					
23 120	1700	2440	263	5 20	2630	279	5 821	785	305	6 401	3090	328	7 51																		
24 480	1800	2520	267	5 70	2660	282	6 361	800	317	6 981	3100	329	8 19																		
25 840	1900	2560	271	6 21	2700	286	6 911	835	331	7 641	3120	331	8 961	3305	360	110 3															
27 200	2000	2600	276	6 69	2730	289	7 681	870	334	8 071	3150	334	9 701	3400	361	110 9															
29 200	2100	2645	285	8 42	2820	299	9 081	2940	312	9 621	3205	340	10 3	3440	365	12 7															
32 640	2400	2795	295	10 11	2900	307	10 70	3100	329	11 4	3201	341	11 6	3450	366	11 7	3560	378	16 8												
35 360	2600	2895	307	11 2	3010	319	12 3	3100	341	12 3	3220	341	12 3	3400	364	12 3	3550	377	20 2	3740	392	12 1									
38 080	2800	3101	319	14 6	3120	331	15 4	3220	341	15 4	3340	354	18 6	3400	364	18 6	3550	377	20 2	3740	392	12 1									
40 800	3000	3130	327	17 2	3230	343	17 8	3340	355	20 8	3430	364	21 8	3400	364	21 8	3550	377	20 2	3740	392	12 1									
43 520	3200	3160	336	20 6	3360	356	20 6	3430	364	21 8	3400	364	21 8	3400	364	21 8	3550	377	20 2	3740	392	12 1									
46 240	3400																														
48 960	3600																														
51 680	3800																														
54 400	4000																														

ALL published ratings based on air at 70° F. and 29.92" barometric pressure, and on tests in accordance with N.A.F.M. test code

TABLE 31

No. 44 DOUBLE WIDTH DOUBLE INLET FAN — TYPE FC
CIRCUM. = 11.65' WHEEL DIA. 44 1/2" OUTLET AREA = 20.00 SQ. FT.

STATIC PRESSURE ➤									
CFM	OUTLET VEL.	TIP SPEED RPM	HP	TIP SPEED RPM	HP	TIP SPEED RPM	HP	TIP SPEED RPM	HP
16,432	800	1050	90	70	1385	119	110		
18,486	900	1090	94	88	1400	120	113	1695	149
20,540	1000	1150	99	104	1435	123	115	1700	146
22,594	1100	1210	104	118	1470	126	118	242	1950
24,648	1200	1260	108	126	1500	130	121	167	307
26,702	1300	1340	115	137	1550	133	123	190	369
28,756	1400	1400	120	143	1600	136	126	210	431
30,810	1500			150	1650	140	129	230	493
32,864	1600			155	1700	143	131	250	555
34,918	1700			160	1750	146	133	270	617
36,972	1800			165	1800	149	135	290	679
39,026	1900			170	1850	152	137	310	741
41,080	2000			175	1900	155	139	330	803
43,134	2100			180	1950	158	141	350	865
45,188	2200			185	2000	161	143	370	927
47,242	2300			190	2050	164	145	390	989
49,296	2400			195	2100	167	147	410	1051
51,350	2500			200	2150	170	149	430	1113
53,404	2600			205	2200	173	151	450	1175
55,458	2700			210	2250	176	153	470	1237
57,512	2800			215	2300	179	155	490	1299
59,566	2900			220	2350	182	157	510	1361
61,620	3000			225	2400	185	159	530	1423
63,674	3100			230	2450	188	161	550	1485
65,728	3200			235	2500	191	163	570	1547
67,782	3300			240	2550	194	165	590	1609
69,836	3400			245	2600	197	167	610	1671
71,890	3500			250	2650	200	169	630	1733
73,944	3600			255	2700	203	171	650	1795
75,998	3700			260	2750	206	173	670	1857
78,052	3800			265	2800	209	175	690	1919
80,106	3900			270	2850	212	177	710	1981
82,160	4000			275	2900	215	179	730	2043
84,214	4100			280	2950	218	181	750	2105
86,268	4200			285	3000	221	183	770	2167
88,322	4300			290	3050	224	185	790	2229
90,376	4400			295	3100	227	187	810	2291
92,430	4500			300	3150	230	189	830	2353
94,484	4600			305	3200	233	191	850	2415
96,538	4700			310	3250	236	193	870	2477
98,592	4800			315	3300	239	195	890	2539
100,646	4900			320	3350	242	197	910	2601
102,700	5000			325	3400	245	199	930	2663
104,754	5100			330	3450	248	201	950	2725
106,808	5200			335	3500	251	203	970	2787
108,862	5300			340	3550	254	205	990	2849
110,916	5400			345	3600	257	207	1010	2911
112,970	5500			350	3650	260	209	1030	2973
115,024	5600			355	3700	263	211	1050	3035
117,078	5700			360	3750	266	213	1070	3097
119,132	5800			365	3800	269	215	1090	3159
121,186	5900			370	3850	272	217	1110	3221
123,240	6000			375	3900	275	219	1130	3283
125,294	6100			380	3950	278	221	1150	3345
127,348	6200			385	4000	281	223	1170	3407
129,402	6300			390	4050	284	225	1190	3469
131,456	6400			395	4100	287	227	1210	3531
133,510	6500			400	4150	290	229	1230	3593
135,564	6600			405	4200	293	231	1250	3655
137,618	6700			410	4250	296	233	1270	3717
139,672	6800			415	4300	299	235	1290	3779
141,726	6900			420	4350	302	237	1310	3841
143,780	7000			425	4400	305	239	1330	3903
145,834	7100			430	4450	308	241	1350	3965
147,888	7200			435	4500	311	243	1370	4027
149,942	7300			440	4550	314	245	1390	4089
151,996	7400			445	4600	317	247	1410	4151
154,050	7500			450	4650	320	249	1430	4213
156,104	7600			455	4700	323	251	1450	4275
158,158	7700			460	4750	326	253	1470	4337
160,212	7800			465	4800	329	255	1490	4399
162,266	7900			470	4850	332	257	1510	4461
164,320	8000			475	4900	335	259	1530	4523
166,374	8100			480	4950	338	261	1550	4585
168,428	8200			485	5000	341	263	1570	4647
170,482	8300			490	5050	344	265	1590	4709
172,536	8400			495	5100	347	267	1610	4771
174,590	8500			500	5150	350	269	1630	4833
176,644	8600			505	5200	353	271	1650	4895
178,698	8700			510	5250	356	273	1670	4957
180,752	8800			515	5300	359	275	1690	5019
182,806	8900			520	5350	362	277	1710	5081
184,860	9000			525	5400	365	279	1730	5143
186,914	9100			530	5450	368	281	1750	5205
188,968	9200			535	5500	371	283	1770	5267
191,022	9300			540	5550	374	285	1790	5329
193,076	9400			545	5600	377	287	1810	5391
195,130	9500			550	5650	380	289	1830	5453
197,184	9600			555	5700	383	291	1850	5515
199,238	9700			560	5750	386	293	1870	5577
201,292	9800			565	5800	389	295	1890	5639
203,346	9900			570	5850	392	297	1910	5701
205,400	10000			575	5900	395	299	1930	5763
207,454	10100			580	5950	398	301	1950	5825
209,508	10200			585	6000	401	303	1970	5887
211,562	10300			590	6050	404	305	1990	5949
213,616	10400			595	6100	407	307	2010	6011
215,670	10500			600	6150	410	309	2030	6073
217,724	10600			605	6200	413	311	2050	6135
219,778	10700			610	6250	416	313	2070	6197
221,832	10800			615	6300	419	315	2090	6259
223,886	10900			620	6350	422	317	2110	6321
225,940	11000			625	6400	425	319	2130	6383
227,994	11100			630	6450	428	321	2150	6445
230,048	11200			635	6500	431	323	2170	6507
232,102	11300			640	6550	434	325	2190	6569
234,156	11400			645	6600	437	327	2210	6631
236,210	11500			650	6650	440	329	2230	6693
238,264	11600			655	6700	443	331	2250	6755
240,318	11700			660	6750	446	333	2270	6817
242,372	11800			665	6800	449	335	2290	6879
244,426	11900			670	6850	452	337	2310	6941
246,480	12000			675	6900	455	339	2330	7003
248,534	12100			680	6950	458	341	2350	7065
250,588	12200			685	7000	461	343	2370	7127
252,642	12300			690	7050	464	345	2390	7189
254,696	12400			695	7100	467	347	2410	7251
256,750	12500			700	7150	470	349	2430	7313
258,804	12600			705	7200	473	351	2450	7375
260,858	12700			710	7250	476	353	2470	7437
262,912	12800			715	7300	479	355	2490	7499
264,966	12900			720	7350	482	357	2510	7561
267,020	13000			725	7400	485	359	2530	7623
269,074	13100			730	7450	488	361	2550	7685
271,128	13200			735	7500	491	363	2570	7747
273,182	13300			740	7550	494	365	2590	7809
275,236	13400			745	7600	497	367	2610	7871
277,290	13500			750	7650	500	369	2630	7933
279,344	13600			755	7700	503	371	2650	7995
281,398	13700			760	7750	506	373	2670	8057
283,452	13800			765	7800	509	375	2690	8119
285,506	13900			770	7850	512	377	2710	8181
287,560	14000			775	7900	515	379	2730	8243
289,614	14100			780	7950	518	381	2750	8305
291,668	14200			785	8000	521	383	2770	8367
293,722	14300			790	8050	524	385	2790	8429
295,776	14400			795	8100	527	387	2810	8491
297,830	14500			800	8150	530</			

FC - DWDI

TABLE 33

No. 54 DOUBLE WIDTH DOUBLE INLET FAN - TYPE FC
CIRCUM. = 14.14' WHEEL DIA. 54" OUTLET AREA = 2.95 SQ. FT.

STATIC PRESSURE	1/8"	1/4"	3/8"	1/2"	5/8"
CFM	OUTLET VEL. Speed RPM	Tip Speed RPM	HP	Tip Speed RPM	HP
24,480	800	1050	74	1 031	385
27,540	900	1090	77	1 201	400
30,600	1000	1150	81	1 561	435
33,660	1100	1210	86	1 881	470
36,720	1200	1260	89	2 471	520
39,780	1300	1340	95	3 081	550
42,840	1400	1400	99	3 761	610
45,900	1500			4 451	680
48,960	1600			5 131	750
52,020	1700			5 931	820
55,080	1800			6 991	900
58,140	1900			8 021	980
61,200	2000			9 361	1080
64,260	2100			10 811	1190
67,320	2200			12 271	1300
70,380	2300			13 741	1420
73,440	2400			15 221	1540
76,500	2500			16 711	1670
79,560	2600			18 211	1800
82,620	2700			19 721	1940
85,680	2800			21 241	2080
88,740	2900			22 771	2230
91,800	3000			24 311	2380
94,860	3100			25 861	2540
97,920	3200			27 421	2700
100,980	3300			28 991	2860
104,040	3400			30 571	3020
107,100	3500			32 161	3190
110,160	3600			33 761	3360
113,220	3700			35 371	3540
116,280	3800			36 991	3720
119,340	3900			38 621	3900
122,400	4000			40 261	4090
125,460	4100			41 911	4280
128,520	4200			43 571	4480
131,580	4300			45 241	4680
134,640	4400			46 911	4880
137,700	4500			48 591	5080
140,760	4600			50 281	5280
143,820	4700			51 981	5480
146,880	4800			53 691	5680
150,000	4900			55 411	5880
153,120	5000			57 141	6080
156,240	5100			58 881	6280
159,360	5200			60 631	6480
162,480	5300			62 391	6680
165,600	5400			64 161	6880
168,720	5500			65 941	7080
171,840	5600			67 731	7280
174,960	5700			69 531	7480
178,080	5800			71 341	7680
181,200	5900			73 161	7880
184,320	6000			74 991	8080
187,440	6100			76 831	8280
190,560	6200			78 681	8480
193,680	6300			80 541	8680
196,800	6400			82 411	8880
199,920	6500			84 291	9080
203,040	6600			86 181	9280
206,160	6700			88 081	9480
209,280	6800			89 991	9680
212,400	6900			91 911	9880
215,520	7000			93 841	10080
218,640	7100			95 781	10280
221,760	7200			97 731	10480
224,880	7300			99 691	10680
228,000	7400			101 661	10880
231,120	7500			103 641	11080
234,240	7600			105 631	11280
237,360	7700			107 631	11480
240,480	7800			109 641	11680
243,600	7900			111 661	11880
246,720	8000			113 691	12080
249,840	8100			115 731	12280
252,960	8200			117 781	12480
256,080	8300			119 841	12680
259,200	8400			121 911	12880
262,320	8500			123 991	13080
265,440	8600			126 081	13280
268,560	8700			128 181	13480
271,680	8800			130 291	13680
274,800	8900			132 411	13880
277,920	9000			134 541	14080
281,040	9100			136 681	14280
284,160	9200			138 831	14480
287,280	9300			140 991	14680
290,400	9400			143 161	14880
293,520	9500			145 341	15080
296,640	9600			147 531	15280
299,760	9700			149 731	15480
302,880	9800			151 941	15680
306,000	9900			154 161	15880
309,120	10000			156 391	16080
312,240	10100			158 631	16280
315,360	10200			160 881	16480
318,480	10300			163 141	16680
321,600	10400			165 411	16880
324,720	10500			167 691	17080
327,840	10600			169 981	17280
330,960	10700			172 281	17480
334,080	10800			174 591	17680
337,200	10900			176 911	17880
340,320	11000			179 241	18080
343,440	11100			181 581	18280
346,560	11200			183 931	18480
349,680	11300			186 291	18680
352,800	11400			188 661	18880
355,920	11500			191 041	19080
359,040	11600			193 431	19280
362,160	11700			195 831	19480
365,280	11800			198 241	19680
368,400	11900			200 661	19880
371,520	12000			203 091	20080
374,640	12100			205 531	20280
377,760	12200			207 981	20480
380,880	12300			210 441	20680
384,000	12400			212 911	20880
387,120	12500			215 391	21080
390,240	12600			217 881	21280
393,360	12700			220 381	21480
396,480	12800			222 891	21680
399,600	12900			225 411	21880
402,720	13000			227 941	22080
405,840	13100			230 481	22280
408,960	13200			233 031	22480
412,080	13300			235 591	22680
415,200	13400			238 161	22880
418,320	13500			240 741	23080
421,440	13600			243 331	23280
424,560	13700			245 931	23480
427,680	13800			248 541	23680
430,800	13900			251 161	23880
433,920	14000			253 791	24080
437,040	14100			256 431	24280
440,160	14200			259 081	24480
443,280	14300			261 741	24680
446,400	14400			264 411	24880
449,520	14500			267 091	25080
452,640	14600			269 781	25280
455,760	14700			272 481	25480
458,880	14800			275 191	25680
462,000	14900			277 911	25880
465,120	15000			280 641	26080
468,240	15100			283 381	26280
471,360	15200			286 131	26480
474,480	15300			288 891	26680
477,600	15400			291 661	26880
480,720	15500			294 441	27080
483,840	15600			297 231	27280
486,960	15700			300 031	27480
490,080	15800			302 841	27680
493,200	15900			305 661	27880
496,320	16000			308 491	28080
499,440	16100			311 331	28280
502,560	16200			314 181	28480
505,680	16300			317 041	28680
508,800	16400			319 911	28880
511,920	16500			322 791	29080
515,040	16600			325 681	29280
518,160	16700			328 581	29480
521,280	16800			331 491	29680
524,400	16900			334 411	29880
527,520	17000			337 341	30080
530,640	17100			340 281	30280
533,760	17200			343 231	30480
536,880	17300			346 191	30680
540,000	17400			349 161	30880
543,120	17500			352 141	31080
546,240	17600			355 131	31280
549,360	17700			358 131	31480
552,480	17800			361 141	31680
555,600	17900			364 161	31880
558,720	18000			367 191	32080
561,840	18100			370 231	32280
564,960	18200			373 281	32480
568,080	18300			376 341	32680
571,200	18400			379 411	32880
574,320	18500			382 491	33080
577,440	18600			385 581	33280
580,560	18700			388 681	33480
583,680	18800			391 791	33680
586,800	18900			394 911	33880
589,920	19000			398 041	34080
593,040	19100			401 181	34280
596,160	19200			404 331	34480
599,280	19300			407 491	34680
602,400	19400			410 661	34880
605,520	19500			413 841	35080
608,640	19600			417 031	35280
611,760	19700			420 231	35480
614,880	19800			423 441	35680
618,000	19900			426 661	35880
621,120	20000			429 891	36080
624,240	20100			433 131	36280
627,360	20200			436 381	36480
630,480	20300			439 641	36680
633,600	20400			442 911	36880
636,720	20500			446 191	37080
639,840	20600			449 481	37280
642,960	20700			452 781	37480
646,080	20800			456 091	37680
649,200	20900			459 411	37880
652,320	21000			462 741	38080
655,440	21100			466 081	38280
658,560	21200			469 431	38480
661,680	21300			472 791	38680
664,800	21400			476 161	38880
667,920	21500			479 541	39080
671,040	21600			482 931	39280
674,160	21700			486 331	39480
677,280	21800			489 741	39680
680,400	21900			493 161	39880
683,520	22000			496 591	40080
686,640	22100			500 031	40280
68					

TABLE 35
No. 66 DOUBLE WIDTH DOUBLE INLET FAN — TYPE FC
CIRCUM. = 17.28' WHEEL DIA. 66" OUTLET AREA = 43.90 SQ. FT.

STATIC PRESSURE ➡													1/8"	1/4"	3/8"	1/2"	5/8"	
CFM	OUT. VEL.	TS	RPM	HP	PV	RPM	HP	PV	RPM	HP	PV	RPM	HP	PV	RPM	HP		
35,120	800	1050	61	1.52	1385	80	2.40											
39,510	900	1090	63	1.92	1400	81	2.92											
43,900	1000	1150	66	2.40	1435	83	3.48	1700	98	4.52								
48,290	1100	1210	70	2.96	1470	85	4.16	1720	99	5.36	1950	113	6.80					
52,680	1200	1260	73	3.88	1520	88	5.00	1755	101	6.32	1970	114	7.80					
57,070	1300	1340	77	4.84	1550	90	5.76	1780	103	7.24	1990	115	8.88	2200	127	10.7		
61,460	1400	1400	81	5.92	1610	93	6.96	1820	105	8.32	2020	117	10.0	2210	128	11.6		
65,850	1500	1450	84	6.72	1670	96	8.08	1870	108	9.56	2055	119	11.2	2240	130	12.9		
70,240	1600	1510	87	7.80	1715	99	9.40	1920	111	10.9	2100	122	12.6	2280	132	14.9		
74,630	1700				1790	103	11.0	1970	114	12.4	2140	124	14.2	2320	134	16.1		
79,020	1800				1850	107	12.6	2030	117	14.2	2180	126	16.0	2360	137	17.9		
83,410	1900				1920	111	14.8	2080	120	16.1	2240	130	17.7	2400	139	19.6		
87,800	2000				1980	115	17.1	2130	123	18.7	2300	133	19.4	2450	142	22.2		
95,580	2200							2270	131	23.1	2420	140	25.1	2540	147	26.9		
105,360	2400									2390	138	28.7	2520	145	30.9	2650	153	32.5
STATIC PRESSURE ➡													3/4"	1"	1 1/8"	1 1/4"	1 1/2"	
52,680	1200																	
57,070	1300	2395	138	11.9														
61,460	1400	2400	139	13	32580	149	15.0											
65,850	1500	2420	140	14.8	2585	150	16.5											
70,240	1600	2450	141	16.4	2610	151	18	32770	160	20.3								
74,630	1700	2480	143	17.6	2630	152	20.2	2785	161	22.2								
79,020	1800	2520	145	19.8	2660	154	22.0	2800	162	24.2	3100	179	28.4	3390	196	33.0		
83,410	1900	2560	148	21.5	2700	156	23.9	2835	164	26.5	3120	181	31.0	3395	196	35.5		
87,800	2000	2600	151	23.9	2730	158	26.6	2870	166	28.0	3150	182	33.6	3400	197	37.7		
95,580	2200	2685	155	26.6	2820	163	31.5	2940	170	33.3	3205	185	39.0	33440	199	44.0		
105,360	2400	2785	161	31.4	2900	168	37.5	3040	176	39.8	3260	189	45.6	33510	203	50.4		
114,140	2600	2895	167	42.4	3010	174	44.8	3100	179	46.4	3350	194	52.4	33560	206	58.0		
122,920	2800	3010	172	50.4	3120	181	52.8	3220	186	56.0	33450	200	60.4	33640	210	67.2		
131,700	3000	3130	181	59.6	3230	187	62.0	3340	193	64.4	33550	205	70.4	33740	216	76.4		
140,480	3200	3260	189	69.6	3250	194	72.0	33430	199	73.5	33655	211	81.2	33840	222	87.6		
149,260	3400							3580	207	88.4	33760	217	92.8	33940	228	99.6		
158,040	3600									3700	214	101.0	33860	223	107.0	339114.0		
STATIC PRESSURE ➡													1 3/4"	2"	2 1/4"	2 1/2"	3"	
79,020	1800																	
87,800	2000	3650	211	43.6														
95,580	2200	3655	212	50.4	3900	226	56.0	4140	239	62.0								
105,360	2400	3720	215	57.2	3940	228	62.4	4150	240	68.4	4380	253	76.4					
114,140	2600	3780	218	64.4	3980	230	70.8	4185	242	77.2	4400	254	86.4	4790	277	98.0		
122,920	2800	3845	222	72.4	4040	234	78.2	4240	245	86.0	4420	256	92.4	4800	278	106.0		
131,700	3000	3920	226	82.4	4110	238	89.2	4300	249	96.0	4480	259	103.0	4840	280	118.0		
140,480	3200	4000	231	93.6	4200	242	101.0	4380	254	108.0	4560	264	115.0	4900	284	130.0		
149,260	3400	4110	238	105.0	4280	247	114.0	4460	258	121.0	4640	268	129.0	4960	288	142.0		
158,040	3600	4210	243	118.0	4360	252	128.0	4540	263	134.0	4720	273	142.0	5040	292	150.0		
166,820	3800				4480	259	141.0	4640	268	151.0	4800	278	156.0	5120	296	172.0		
175,600	4000							4600	266	155.0	4740	274	167.0	4900	284	175.0		

BI - SWSI

TABLE 36

No. 15 SINGLE WIDTH SINGLE INLET FAN — TYPE BI

$$\text{Max. HP} = .195 \left(\frac{\text{RPM}}{1000} \right)^3$$

CIRCUM. = 3.93' WHEEL DIA. 15" OUTLET AREA = 1.23 SQ. FT.

STATIC PRESSURE →																			
		1 3/8"	1 1/2"	1 3/4"	1 7/8"	2"	2 1/4"	2 1/2"	2 3/4"					1 3/8"	1 1/2"	1 3/4"	1 7/8"	2"	2 1/4"
CFM	VEL.	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP
738	600	2075	528	04	2455	719	06	3125	810	08	3185	810	08	3185	810	08	3185	810	08
861	700	2325	591	04	2640	772	06	3260	848	08	3350	848	08	3350	848	08	3350	848	08
984	800	2540	646	05	2865	729	08	3310	791	10	3440	791	10	3440	791	10	3440	791	10
1107	900	2790	710	06	3080	784	09	3330	847	12	3580	910	14	3635	910	14	3635	910	14
1230	1000	3030	771	07	3270	832	11	3545	902	14	3760	957	17	3880	1013	20			
1363	1100				3510	893	14	3750	954	17	3950	1005	20	4170	1061	23			
1476	1200				3770	960	16	3970	1010	20	4170	1061	23	4375	1113	27			
1599	1300							4200	1069	23	4430	1117	27	4585	1167	31			
1722	1400							4420	1124	27	4620	1176	31	4800	1222	35			
1845	1500										4850	1234	35	5020	1277	40			
1968	1600										5080	1293	40	5260	1356	45			
2091	1700										5500	1400	50						
2214	1800													5740	1460	56			
STATIC PRESSURE →																			
		3 1/4"	3 1/2"	3 3/4"	4"	4 1/4"	4 1/2"	4 3/4"	5"					3 1/4"	3 1/2"	3 3/4"	4"	4 1/4"	4 1/2"
984	800	3950	1005	.18	4220	1074	.20	4480	1140	.23	4740	1257	.29	5370	1366	.36			
1107	900	4070	1036	.20	4320	1100	.23	4530	1153	.26	4800	1272	.32	5415	1378	.39			
1230	1000	4200	1069	.23	4450	1127	.26	4650	1183	.28	5075	1291	.35	5510	1402	.43			
1363	1100	4375	1113	.26	4590	1168	.29	4770	1214	.32	5170	1316	.39	5580	1420	.47			
1476	1200	4560	1160	.30	4740	1206	.33	4910	1249	.37	5300	1349	.44	5650	1438	.52			
1599	1300	4720	1200	.33	4910	1249	.37	5080	1293	.41	5445	1385	.49	5800	1475	.57			
1722	1400	4960	1262	.39	5120	1303	.42	5260	1356	.46	5600	1425	.54	5930	1509	.63			
1845	1500	5170	1316	.44	5320	1354	.48	5480	1395	.52	5780	1471	.60	6080	1547	.69			
1968	1600	5390	1372	.49	5520	1404	.54	5700	1450	.58	5975	1520	.67	6220	1593	.76			
2091	1700	5600	1425	.54	5750	1464	.60	5920	1506	.65	6190	1576	.74	6435	1637	.83			
2214	1800	5830	1483	.60	5990	1525	.67	6140	1562	.72	6420	1634	.83	6640	1690	.92			
2337	1900	6080	1547	.68	6250	1590	.74	6360	1618	.80	6645	1691	.90	6830	1738	1.01			
2460	2000	6320	1608	.75	6430	1636	.81	6550	1667	.88	6840	1740	1.00	7090	1804	1.11			
STATIC PRESSURE →																			
		1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"	3"	3 1/4"	3 1/2"					1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"	3"
1230	1000	5890	1499	.51	6240	1588	.59	6600	1679	.67	6910	1758	.75	7530	1916	.93			
1363	1100	5950	1514	.55	6290	1601	.64	6660	1695	.72	6970	1774	.81	7570	1926	.98			
1476	1200	6020	1532	.60	6390	1626	.69	6720	1710	.78	7030	1789	.87	7630	1941	1.04			
1599	1300	6120	1557	.66	6480	1648	.74	6800	1730	.83	7100	1807	.93	7695	1958	1.11			
1722	1400	6260	1592	.72	6580	1674	.81	6880	1751	.90	7180	1827	.99	7760	1975	1.19			
1845	1500	6420	1634	.79	6720	1710	.88	6960	1771	.98	7260	1847	1.08	7825	1991	1.27			
1968	1600	6570	1672	.86	6870	1750	.95	7110	1809	1.04	7350	1870	1.14	7900	2010	1.36			
2091	1700	6720	1709	.94	7000	1780	1.04	7240	1832	1.15	7480	1913	1.25	7990	2033	1.47			
2214	1800	6885	1752	1.02	7160	1817	1.13	7430	1890	1.24	7670	1952	1.34	8140	2071	1.57			
2337	1900	7080	1802	1.11	7320	1863	1.21	7570	1926	1.34	7820	1990	1.45	8290	2110	1.79			
2460	2000	7310	1861	1.22	7520	1913	1.33	7750	1972	1.45	7970	2030	1.56	8450	2139	1.91			
2706	2200	7740	1970	1.44	7900	2010	1.56	8200	2087	1.70	8345	2123	1.82	8750	2262	2.03			
2952	2400	8120	2066	1.66	8350	2124	1.80	8580	2183	1.94	8745	2225	2.09	9115	2319	2.34			

All published ratings based on air at 70° F. and 29.92" barometric pressure, and on tests in accordance with N.A.F.M. test code.

TABLE 37

No. 18 SINGLE WIDTH SINGLE INLET FAN — TYPE BI

$$\text{Max. HP} = .48 \left(\frac{\text{RPM}}{1000} \right)^3$$

CIRCUM. = 4.71' WHEEL DIA. 18" OUTLET AREA = 1.77 SQ. FT.

STATIC PRESSURE ➤																			
CFM	OUTLET VEL.	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP
1062	600	2075	441	.03	2455	521	.06	2825	600	.09	3185	676	.12	3515	746	.16			
1239	700	2325	493	.05	2640	561	.08	2960	628	.11	3290	698	.14	3590	762	.18			
1416	800	2540	539	.07	2865	608	.11	3110	660	.14	3440	730	.17	3675	780	.21			
1593	900	2790	592	.09	3080	654	.13	3330	707	.17	3580	760	.20	3835	815	.24			
1770	1000	3030	642	.11	3270	694	.16	3545	754	.20	3760	798	.24	3980	845	.28			
1947	1100				3510	746	.20	3750	796	.24	3950	839	.28	4170	885	.33			
2124	1200				3770	800	.23	3970	843	.28	4170	885	.33	4375	929	.38			
2301	1300							4200	892	.33	4390	932	.38	4585	974	.44			
2478	1400							4420	938	.38	4620	981	.44	4800	1020	.50			
2655	1500										4850	1030	.50	5020	1066	.56			
2832	1600										5080	1078	.57	5260	1131	.63			
3009	1700										5500	1167	.71						
3188	1800													5740	1218	.80			
STATIC PRESSURE ➤																			
		3 1/4"	3 1/2"	3 3/4"	4"	4 1/4"	4 1/2"	4 3/4"	5"					3 1/4"	3 1/2"	3 3/4"	4"	4 1/4"	4 1/2"
1416	800	3950	839	.24	4220	896	.28	4480	951	.33	4940	1049	.42	5370	1140	.51			
1593	900	4070	864	.28	4320	917	.33	4530	962	.37	5000	1062	.46	5415	1150	.56			
1770	1000	4200	891	.32	4450	944	.37	4650	987	.41	5075	1077	.51	5510	1170	.61			
1947	1100	4375	929	.37	4590	975	.42	4770	1012	.46	5170	1098	.56	5580	1185	.67			
2124	1200	4560	968	.43	4740	1006	.47	4910	1042	.52	5300	1125	.63	5650	1200	.74			
2301	1300	4720	1002	.49	4910	1042	.53	5080	1078	.58	5445	1156	.70	5800	1232	.82			
2478	1400	4960	1053	.56	5120	1087	.61	5260	1131	.66	5600	1189	.78	5930	1259	.90			
2655	1500	5170	1098	.63	5320	1130	.69	5480	1163	.74	5780	1227	.86	6080	1300	.99			
2832	1600	5390	1144	.70	5520	1172	.77	5700	1210	.83	5975	1269	.96	6220	1321	1.09			
3009	1700	5600	1189	.78	5750	1220	.86	5920	1257	.93	6190	1314	1.07	6435	1366	1.20			
3188	1800	5830	1238	.87	5990	1272	.95	6140	1303	.1	6420	1363	1.19	6640	1410	1.32			
3363	1900	6080	1290	.97	6250	1327	1.06	6360	1350	1.15	6645	1411	1.30	6830	1450	1.45			
3540	2000	6320	1342	1.08	6430	1365	1.17	6550	1390	1.27	6840	1452	1.43	7090	1505	1.60			
STATIC PRESSURE ➤																			
		1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"	3"												
1770	1000	5890	1251	.72	6240	1325	.84	6600	1401	.96	6910	1467	1.08	7530	1599	1.33			
1947	1100	5950	1263	.79	6290	1335	.92	6660	1414	1.03	6970	1480	1.16	7570	1607	1.41			
2124	1200	6020	1278	.86	6360	1356	.99	6720	1427	1.12	7030	1493	1.25	7630	1620	1.50			
2301	1300	6120	1299	.94	6480	1376	1.07	6800	1444	1.20	7100	1507	1.33	7695	1631	1.60			
2478	1400	6260	1329	1.03	6580	1397	1.16	6880	1461	1.29	7180	1524	1.43	7760	1648	1.71			
2655	1500	6420	1363	1.13	6720	1427	1.27	6960	1478	1.40	7260	1541	1.55	7825	1661	1.83			
2832	1600	6570	1394	1.23	6870	1459	1.37	7110	1509	1.50	7350	1561	1.67	7900	1677	1.97			
3009	1700	6720	1427	1.34	7000	1486	1.49	7270	1543	1.64	7520	1597	1.80	7990	1686	2.11			
3188	1800	6885	1462	1.47	7160	1519	1.62	7430	1575	1.78	7670	1628	1.93	8190	1729	2.25			
3363	1900	7080	1503	1.60	7320	1554	1.77	7570	1607	1.92	7820	1660	2.08	8290	1760	2.40			
3540	2000	7310	1552	1.76	7520	1597	1.92	7750	1645	2.08	7970	1692	2.24	8405	1785	2.56			
3894	2200	7740	1643	2.08	7990	1677	2.25	8200	1741	2.44	8345	1772	2.62	8750	1858	2.92			
4248	2400	8120	1724	2.40	8350	1773	2.62	8580	1822	2.80	8745	1857	3.00	9115	1935	3.36			

TABLE 38

No. 21 SINGLE WIDTH SINGLE INLET FAN — TYPE BI

Max. HP = $1.05 \left(\frac{\text{RPM}}{1000} \right)^3$

CIRCUM. = 5.5' WHEEL DIA. 21" OUTLET AREA = 2.4 SQ. FT.

STATIC PRESSURE →	1/8"	1/4"	3/8"	1/2"	5/8"
CFM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM
1440	600 12075 3771 .04	12455 4461 .08	28255 5141 .12	31855 5791 .16	35155 6391 .20
1680	700 12325 4422 .07	26400 4801 .11	29600 5381 .15	32900 5981 .20	35900 6531 .25
1920	800 12540 4622 .10	28650 5211 .15	31100 5651 .19	34400 6251 .23	36750 6681 .29
2160	900 12790 5071 .12	30800 5601 .18	33300 6051 .23	35800 6511 .27	38350 6981 .33
2400	1000 13030 5511 .15	32700 5951 .22	35450 6441 .27	37600 6841 .33	39800 7241 .38
2640	1100	35100 6381 .27	37500 6821 .33	39500 7181 .38	41700 7581 .45
2880	1200	37700 6851 .31	39700 7221 .38	41700 7581 .45	43750 7951 .52
3120	1300		42000 7641 .45	43900 7981 .52	45850 8341 .60
3360	1400		44200 8041 .52	46200 8401 .60	48000 8731 .68
3600	1500			48500 8821 .68	50200 9131 .76
3840	1600				50800 9241 .78
4080	1700				52600 9551 .86
4320	1800				55000 10001 .97
4560	1900				57400 10441 1.09
STATIC PRESSURE →	3/4"	1"	1 1/4"	1 1/2"	1 3/4"
1920	800 13950 7181 .33	42200 7671 .38	44800 8151 .45	45400 8981 .57	53700 9761 .69
2160	900 14070 7401 .38	44300 7851 .45	46500 8241 .50	50000 9091 .63	54150 9851 .76
2400	1000 14200 7641 .44	44500 8091 .50	46500 8461 .56	50750 9231 .69	55100 10021 .83
2640	1100 14375 7951 .50	45900 8351 .57	47700 8671 .64	51700 9401 .76	55800 10151 .91
2880	1200 14560 8291 .58	47400 8621 .64	49100 8931 .72	53000 9641 .86	56500 10271 .91
3120	1300 14720 8581 .67	49100 8921 .72	50800 9231 .80	54450 9901 .95	58000 10551 1.12
3360	1400 14960 9021 .76	51200 9301 .83	52600 9551 .90	56000 10191 1.06	59300 10781 1.23
3600	1500 15170 9401 .86	53200 9681 .94	54800 9961 .101	57080 10511 1.17	60800 11051 1.35
3840	1600 15390 9801 .95	55200 10041 1.05	57000 10371 1.13	59750 10861 1.31	62200 11311 1.48
4080	1700 15600 10181 1.06	57500 10461 1.17	59200 10771 1.27	61900 11251 1.46	64350 11701 1.63
4320	1800 15830 10601 1.18	59900 10901 1.31	61400 11161 1.42	64200 11671 1.62	66400 12071 1.80
4560	1900 16080 11051 1.32	62500 11371 1.44	63600 11561 1.57	66450 12081 1.77	68300 12411 1.97
4800	2000 16320 11491 1.47	64300 11691 1.58	65500 11911 1.73	68400 12441 1.95	70300 12891 2.18
STATIC PRESSURE →	1 3/4"	2"	2 1/4"	2 1/2"	3"
2400	1000 15800 10711 .98	62400 11351 1.14	66000 12001 1.31	69100 12561 1.47	75300 13691 1.81
2640	1100 15950 10821 1.07	62900 11441 1.25	66600 12111 1.40	69700 12671 1.58	75700 13761 1.92
2880	1200 16020 10951 1.17	63900 11621 1.35	67200 12221 1.52	70300 12781 1.70	76300 13871 2.04
3120	1300 16120 11131 1.28	64800 11781 1.46	68000 12361 1.62	71000 1291 1.81	76950 13991 2.18
3360	1400 16260 11391 1.40	65800 11961 1.58	68800 12511 1.76	71800 13051 1.95	77600 14121 2.33
3600	1500 16420 11671 1.54	67200 12221 1.73	69600 12651 1.90	72600 13201 2.11	78250 14231 2.49
3840	1600 16570 11941 1.68	68700 12491 1.87	71100 12931 2.04	73500 13361 2.27	79000 14361 2.68
4080	1700 16720 12221 1.84	70000 12721 2.04	72700 13221 2.24	75200 13671 2.47	79800 14531 2.87
4320	1800 16885 12521 2.00	71600 1301 2.21	74300 13501 2.42	76700 13941 2.63	81400 14801 3.07
4560	1900 17080 12881 2.18	73200 1331 2.41	75700 13761 2.61	78200 14221 2.83	82900 15071 3.27
4800	2000 17310 13291 2.39	75200 13671 2.61	77500 14091 2.83	79700 14491 3.05	84050 15281 3.51
5280	2200 17740 14071 2.83	79000 14361 3.06	82000 1491 3.32	83450 15171 3.57	87500 1591 3.98
5760	2400 18120 14771 3.27	83500 15161 3.54	85800 15601 3.81	87450 15901 4.08	91150 16571 4.57

All published ratings based on air at 70° F. and 29.92" barometric pressure, and on tests in accordance with N.A.F.M. test code

BI — SWSI

TABLE 39

No. 24 SINGLE WIDTH SINGLE INLET FAN — TYPE BI

Max. HP = $2.05 \left(\frac{\text{RPM}}{1000} \right)^3$

CIRCUM. = 6.283' WHEEL DIA. 24" OUTLET AREA = 3.142 SQ. FT.

STATIC PRESSURE →	1/8"	1/4"	3/8"	1/2"	5/8"
CFM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM
1885	600 12020 3221 .06	12430 3861 .11	28255 5081 .16	31855 5681 .21	35155 6281 .27
2200	700 12250 3501 .09	12562 4081 .13	29300 4661 .19	32755 5211 .24	35900 5711 .31
2514	800 12380 3791 .12	12755 4381 .17	30500 4861 .23	33755 5371 .28	36755 5851 .35
2828	900 12590 4121 .15	12950 4701 .21	32175 5121 .27	35000 5571 .33	37800 6021 .40
3142	1000 12830 4501 .18	13130 4981 .25	34300 5461 .32	36500 5811 .39	39000 6211 .46
3456	1100	33100 5261 .29	35900 5721 .38	38255 6091 .46	40500 6441 .53
3770	1200	35400 5631 .36	37900 6031 .44	40500 6441 .53	42255 6721 .61
4085	1300		39900 6351 .52	42200 6711 .61	44400 7071 .70
4399	1400		42700 6681 .60	44200 7031 .70	46300 7371 .80
4713	1500			46000 7321 .79	48000 7641 .90
5027	1600			47500 7561 .88	49500 7881 1.00
5342	1700				52000 8281 1.14
5656	1800				54000 8601 1.28
STATIC PRESSURE →	3/4"	1"	1 1/4"	1 1/2"	1 3/4"
2514	800 13950 6291 .42	14200 6711 .49	14480 7141 .56	14940 7871 .72	15370 8541 .90
2828	900 14050 6441 .47	14290 6831 .55	14530 7211 .63	15000 7961 .80	15415 8621 .98
3142	1000 14160 6621 .53	14400 7001 .62	14630 7371 .70	15075 8081 .88	15510 8781 1.07
3456	1100 14290 6831 .60	14520 7191 .69	14750 7561 .78	15170 8231 .96	15580 8881 1.16
3770	1200 14425 7041 .69	14650 7401 .78	14860 7741 .87	15260 8371 1.06	15650 8991 1.26
4085	1300 14550 7241 .79	14780 7611 .88	14990 7941 .97	15390 8581 1.16	15750 9151 1.37
4399	1400 14800 7641 .90	14980 7931 .100	15125 8161 .108	15520 8791 1.27	15860 9331 1.50
4713	1500 14970 7921 .101	15180 8251 .112	15350 8511 .121	15640 8981 1.41	15970 9501 1.64
5027	1600 15160 8221 .113	15380 8561 .125	15510 8771 .135	15800 9241 1.57	16100 9711 1.79
5342	1700 15360 8511 .125	15540 8821 .137	15700 9081 .151	15990 9551 1.74	16250 9941 1.96
5656	1800 15550 8831 .138	15710 9101 .152	15900 9401 .166	16200 9871 1.92	16435 10241 2.17
5971	1900 15750 9151 .153	15920 9431 .167	16080 9681 .182	16390 10171 2.10	16615 10531 2.35
6285	2000 15950 9471 .171	16080 9681 .182	16260 9961 2.00	16560 10441 2.28	16860 10921 2.60
STATIC PRESSURE →	1 3/4"	2"	2 1/4"	2 1/2"	3"
3142	1000 15890 9381 .124	16240 9931 .144	16600 10501 1.65	16910 11001 1.87	17530 11981 2.30
3456	1100 15950 9471 .136	16290 10011 .156	16660 10601 1.76	16970 11091 2.00	17570 12051 2.46
3770	1200 16020 9581 .147	16370 10141 .168	16720 10701 1.91	17030 11191 2.14	17630 12151 2.62
4085	1300 16110 9731 .159	16455 10271 .180	16800 10821 2.05	17100 11301 2.29	17695 12251 2.78
4399	1400 16200 9871 .172	16550 10421 .195	16880 10951 2.20	17180 11431 2.46	17760 12351 2.96
4713	1500 16300 10081 .186	16635 10561 .211	16960 11071 2.36	17260 11551 2.61	17825 12461 3.15
5027	1600 16450 10271 .201	16750 10741 2.28	17050 11221 2.54	17350 11701 2.80	17900 12571 3.35
5342	1700 16575 10471 .219	16865 10931 2.45	17160 11411 2.72	17450 11851 3.00	17990 12701 3.56
5656	1800 16720 10701 .240	17000 11141 2.65	17250 11601 2.91	17560 12031 3.20	18100 12881 3.79
5971	1900 16860 10921 .261	17140 11361 2.86	17400 11781 3.14	17680 12221 3.41	18200 13051 4.03
6285	2000 17080 11271 .286	17300 11621 3.12	17560 12031 3.40	17800 12411 3.67	18320 13251 4.28
6912	2200 17450 11851 .333	17650 12171 3.64	17920 12611 3.95	18100 12881 4.25	18580 13661 4.86
7540	2400 17800 12411 .383	18100 12881 4.20	18250 13121 4.58	18450 13441 4.90	18850 14081 5.55

BI - SWSI

TABLE 40

No. 27 SINGLE WIDTH SINGLE INLET FAN — TYPE BI

$$\text{Max. HP} = 3.70 \left(\frac{\text{RPM}}{1000} \right)^3$$

CIRCUM. = 7.07' WHEEL DIA. 27" OUTLET AREA = 3.97 SQ. FT.

STATIC PRESSURE ➤	1 3/8"			1"			3/8"			1/2"			5/8"			
	Inlet Speed	Tip Speed	HP	Inlet Speed	Tip Speed	HP	Inlet Speed	Tip Speed	HP	Inlet Speed	Tip Speed	HP	Inlet Speed	Tip Speed	HP	
CFM																
2385	600	12025	286	08	12430	344	14	12825	400	20	13185	450	27	13510	497	34
2783	700	12200	311	11	12562	362	17	12930	414	24	13275	463	31	13590	530	39
3181	800	12380	337	15	12755	390	21	13050	431	29	13375	477	35	13675	520	44
3578	900	12590	366	19	12950	417	26	13217	455	34	13500	495	42	13780	535	51
3976	1000	12830	400	23	13130	443	32	13430	485	41	13650	516	50	13900	552	58
4374	1100	13100	438	28	13310	468	37	13590	508	48	13825	541	58	14050	573	67
4771	1200	13400	481	35	13540	501	46	13790	536	56	14050	573	67	14225	598	77
5169	1300	13720	529	43	13820	541	55	13990	564	65	14220	597	76	14440	628	89
5566	1400	14060	582	52	14100	582	65	14200	594	76	14420	625	89	14630	659	101
5964	1500	14420	639	62	14380	624	76	14500	641	87	14600	651	99	14800	679	114
6362	1600	14800	697	73	14660	666	88	14750	672	100	14750	672	110	14950	700	124
6759	1700	15200	764	85	14940	708	100	15000	716	113	15000	716	124	15200	736	144
7156	1800	15620	831	98	15220	750	113	15300	757	127	15300	757	138	15400	764	160
STATIC PRESSURE ➤	1 3/4"			2"			1"			1 1/4"			1 1/2"			
	Inlet Speed	Tip Speed	HP	Inlet Speed	Tip Speed	HP	Inlet Speed	Tip Speed	HP	Inlet Speed	Tip Speed	HP	Inlet Speed	Tip Speed	HP	
3181	800	13950	559	53	14220	597	62	14480	634	71	14940	699	91	15370	760	114
3578	900	14050	573	61	14290	607	70	14530	641	80	15000	707	101	15415	766	124
3976	1000	14160	588	67	14400	622	78	14630	655	89	15075	718	111	15510	779	135
4374	1100	14290	607	76	14520	639	87	14750	672	99	15170	731	122	15580	789	147
4771	1200	14425	626	87	14650	658	99	14860	686	111	15260	742	134	15650	799	160
5169	1300	14550	644	100	14780	678	111	14990	706	123	15390	762	147	15750	813	174
5566	1400	14680	679	114	14980	704	125	15125	725	137	15520	781	161	15860	829	190
5964	1500	14970	703	125	15180	733	141	15350	757	153	15640	798	180	15970	844	205
6362	1600	15160	730	140	15380	761	158	15510	779	171	15800	820	199	16100	863	227
6759	1700	15350	757	156	15540	784	174	15700	806	191	15990	847	220	16250	884	250
7156	1800	15550	785	174	15710	808	193	15900	835	210	16200	877	244	16435	910	275
7554	1900	15750	813	191	15920	837	213	16080	860	231	16390	904	266	16615	936	300
7952	2000	15950	842	215	16080	860	232	16260	885	252	16560	928	288	16860	970	330
STATIC PRESSURE ➤	1 3/8"			2"			1"			1 1/4"			1 1/2"			
	Inlet Speed	Tip Speed	HP	Inlet Speed	Tip Speed	HP	Inlet Speed	Tip Speed	HP	Inlet Speed	Tip Speed	HP	Inlet Speed	Tip Speed	HP	
3976	1000	15890	833	157	16240	883	182	16600	934	209	16910	977	237	17530	1065	291
4374	1100	15950	842	172	16290	890	191	16660	942	223	16970	986	254	17570	1071	312
4771	1200	16020	851	186	16370	901	215	16720	950	242	17030	994	271	17630	1079	332
5169	1300	16110	864	201	16455	913	228	16800	962	259	17100	1004	296	17695	1088	352
5566	1400	16200	877	218	16550	926	247	16880	973	278	17180	1016	311	17760	1098	375
5964	1500	16330	895	237	16635	938	267	16960	984	299	17260	1027	331	17825	1107	399
6362	1600	16450	912	255	16750	955	289	17050	997	322	17350	1040	354	17901	1117	424
6759	1700	16575	930	277	16865	971	310	17160	1016	344	17450	1054	380	17997	1130	450
7156	1800	16720	950	304	17000	990	336	17290	1031	369	17560	1069	405	18100	1146	480
7554	1900	16860	970	331	17140	1010	362	17400	1047	398	17680	1086	432	18200	1160	510
7952	2000	17000	1001	362	17300	1033	395	17560	1069	430	17800	1103	465	18320	1171	545
8747	2200	17450	1054	410	17650	1082	460	17920	1120	500	18100	1146	509	18580	1214	615
9542	2400	17800	1103	485	18100	1146	530	18350	1167	560	18450	1195	560	1950	1252	703

TABLE 43

No. 36 SINGLE WIDTH SINGLE INLET FAN — TYPE BI

$$\text{Max. HP} = 15.6 \left(\frac{\text{RPM}}{1000} \right)^3$$

CIRCUM. = 9.425' WHEEL DIA. 36" OUTLET AREA = 7.07 SQ. FT.

STATIC PRESSURE ➤		1 1/8"		1 1/4"		3/8"		1 1/2"		1 3/4"		2 1/2"		3"		
CFM	OUTLET VEL.	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	
4 242	630	2025	215	14	2430	258	25	2825	300	36	3185	338	47	3515	373	61
4 949	700	2230	233	20	2562	272	29	3020	311	43	3275	347	54	3590	381	70
5 656	800	2380	253	27	2755	292	38	33050	324	52	3375	358	63	3675	390	79
6 363	900	2530	275	34	2950	313	47	3420	341	61	3500	371	78	3780	401	90
7 070	1000	2680	300	41	3130	332	56	3630	364	72	3650	387	88	3900	414	103
7 777	1100	2830	325	48	3310	351	65	3850	381	86	3825	408	103	4050	430	119
8 484	1200	2980	350	55	3490	376	81	3990	402	101	4050	430	119	4225	448	137
9 191	1300	3130	375	62	3670	395	89	4200	423	118	4220	448	137	4440	471	157
9 898	1400	3280	400	69	3850	414	98	4400	446	136	4420	469	158	4630	491	180
10 605	1500	3430	425	76	4030	433	107	4600	461	154	4600	488	178	4800	509	203
11 312	1600	3580	450	83	4210	452	116	4750	475	172	4750	504	198	4950	525	226
12 019	1700	3730	475	90	4390	471	125	4900	491	190	4900	521	216	5100	542	250
12 726	1800	3880	500	97	4570	490	134	5050	505	208	5050	538	234	5250	565	273
STATIC PRESSURE ➤		1 1/8"		1 1/4"		3/8"		1 1/2"		1 3/4"		2 1/2"		3"		
CFM	OUTLET VEL.	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	
4 242	630	2025	215	14	2430	258	25	2825	300	36	3185	338	47	3515	373	61
4 949	700	2230	233	20	2562	272	29	3020	311	43	3275	347	54	3590	381	70
5 656	800	2380	253	27	2755	292	38	33050	324	52	3375	358	63	3675	390	79
6 363	900	2530	275	34	2950	313	47	3420	341	61	3500	371	78	3780	401	90
7 070	1000	2680	300	41	3130	332	56	3630	364	72	3650	387	88	3900	414	103
7 777	1100	2830	325	48	3310	351	65	3850	381	86	3825	408	103	4050	430	119
8 484	1200	2980	350	55	3490	376	81	3990	402	101	4050	430	119	4225	448	137
9 191	1300	3130	375	62	3670	395	89	4200	423	118	4220	448	137	4440	471	157
9 898	1400	3280	400	69	3850	414	98	4400	446	136	4420	469	158	4630	491	180
10 605	1500	3430	425	76	4030	433	107	4600	461	154	4600	488	178	4800	509	203
11 312	1600	3580	450	83	4210	452	116	4750	475	172	4750	504	198	4950	525	226
12 019	1700	3730	475	90	4390	471	125	4900	491	190	4900	521	216	5100	542	250
12 726	1800	3880	500	97	4570	490	134	5050	505	208	5050	538	234	5250	565	273
13 433	1900	4030	525	104	4750	509	143	5200	520	226	5200	565	254	5450	583	296
14 140	2000	4180	550	111	4930	528	152	5350	535	244	5350	586	274	5600	622	327
14 847	2100	4330	575	118	5110	547	161	5500	550	262	5500	615	293	5800	643	349
15 554	2200	4480	600	125	5290	566	170	5650	565	280	5650	634	312	5950	663	370
16 261	2300	4630	625	132	5470	585	179	5800	580	298	5800	653	330	6150	684	392
16 968	2400	4780	650	139	5650	604	188	5950	595	316	5950	672	349	6350	705	414
17 675	2500	4930	675	146	5830	623	197	6100	610	334	6100	691	368	6550	726	436
18 382	2600	5080	700	153	6010	642	206	6250	625	352	6250	710	387	6750	747	458
19 089	2700	5230	725	160	6190	661	215	6400	640	370	6400	729	406	6950	768	480
19 796	2800	5380	750	167	6370	680	224	6550	655	388	6550	748	425	7150	789	502
20 503	2900	5530	775	174	6550	699	233	6700	670	406	6700	767	444	7350	810	524
21 210	3000	5680	800	181	6730	718	242	6850	685	424	6850	786	463	7550	831	546
21 917	3100	5830	825	188	6910	737	251	7000	700	442	7000	805	482	7750	852	568
22 624	3200	5980	850	195	7090	756	260	7150	715	460	7150	824	501	7950	873	590
23 331	3300	6130	875	202	7270	775	269	7300	730	478	7300	843	520	8150	894	612
24 038	3400	6280	900	209	7450	794	278	7450	745	496	7450	862	539	8350	915	634
24 745	3500	6430	925	216	7630	813	287	7600	760	514	7600	881	558	8550	936	656
25 452	3600	6580	950	223	7810	832	296	7750	775	532	7750	900	577	8750	957	678
26 159	3700	6730	975	230	7990	851	305	7900	790	550	7900	919	596	8950	978	700
26 866	3800	6880	1000	237	8170	870	314	8050	805	568	8050	938	615	9150	999	722
27 573	3900	7030	1025	244	8350	889	323	8200	820	586	8200	957	634	9350	1020	744
28 280	4000	7180	1050	251	8530	908	332	8350	835	604	8350	976	653	9550	1041	766
28 987	4100	7330	1075	258	8710	927	341	8500	850	622	8500	995	672	9750	1062	788
29 694	4200	7480	1100	265	8890	946	350	8650	865	640	8650	1014	691	9950	1083	810
30 401	4300	7630	1125	272	9070	965	359	8800	880	658	8800	1033	710	10150	1104	832
31 108	4400	7780	1150	279	9250	984	368	8950	895	676	8950	1052	729	10350	1125	854
31 815	4500	7930	1175	286	9430	1003	377	9100	910	694	9100	1071	748	10550	1146	876
32 522	4600	8080	1200	293	9610	1022	386	9250	925	712	9250	1090	767	10750	1167	898
33 229	4700	8230	1225	300	9790	1041	395	9400	940	730	9400	1109	786	10950	1188	920
33 936	4800	8380	1250	307	9970	1060	404	9550	955	748	9550	1128	805	11150	1209	942
34 643	4900	8530	1275	314	10150	1079	413	9700	970	766	9700	1147	824	11350	1230	964
35 350	5000	8680	1300	321	10330	1098	422	9850	985	784	9850	1166	843	11550	1251	986
36 057	5100	8830	1325	328	10510	1117	431	10000	1000	802	10000	1185	862	11750	1272	1008
36 764	5200	8980	1350	335	10690	1136	440	10150	1015	820	10150	1204	881	11950	1293	1030
37 471	5300	9130	1375	342	10870	1155	449	10300	1030	838	10300	1223	900	12150	1314	1052
38 178	5400	9280	1400	349	11050	1174	458	10450	1045	856	10450	1242	919	12350	1335	1074
38 885	5500	9430	1425	356	11230	1193	467	10600	1060	874	10600	1261	938	12550	1356	1096
39 592	5600	9580	1450	363	11410	1212	476	10750	1075	892	10750	1280	957	12750	1377	1118
40 299	5700	9730	1475	370	11590	1231	485	10900	1090	910	10900	1300	976	12950	1398	1140
41 006	5800	9880	1500	377	11770	1250	494	11050	1105	928	11050	1319	995	13150	1419	1162
41 713	5900	10030	1525	384	11950	1269	503	11200	1120	946	11200	1338	1014	13350	1440	1184
42 420	6000	10180	1550	391	12130	1288	512	11350	1135	964	11350	1357	1033	13550	1461	1206
43 127	6100	10330	1575	398	12310	1307	521	11500	1150	982	11500	1376	1052	13750	1482	1228
43 834	6200	10480	1600	405	12490	1326	530	11650	1165	1000	11650	1395	1071	13950	1503	1250
44 541	6300	10630	1625	412	12670	1345	539	11800	1180	1018	11800	1414	1090	14150	1524	1272
45 248	6400	10780	1650	419	12850	1364	548	11950	1195	1036	11950	1433	1109	14350	1545	1294
45 955	6500	10930	1675	426	13030	1383	557	12100	1210	1054	12100	1452	1128	14550	1566	1316
46 662	6600	11080	1700	433	13210	1402	566	12250	1225	1072	12250	1471	1147	14750	1587	1338
47 369	6700	11230	1725	440	13390	1421	575	12400	1240	1090	12400	1490	1166	149		

BI - SWSI

TABLE 44

No. 40 SINGLE WIDTH SINGLE INLET FAN — TYPE BI

$$\text{Max. HP} = 27.4 \left(\frac{\text{RPM}}{1000} \right)^3$$

CIRCUM. = 10.55' WHEEL DIA. 40 1/4" OUTLET AREA = 8.86 SQ. FT.

STATIC PRESSURE ➡	1 3/8"			1 1/4"			3/8"			1/2"			5/8"			
	OUTLET VEL.	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	
5.316	600	12025	192	18	2430	230	31	2825	268	45	3185	302	59	3515	333	76
6.202	700	12200	209	25	2562	243	36	2930	278	54	3275	310	68	3590	340	87
7.088	800	12380	226	34	2755	261	47	3050	289	65	3375	320	79	3675	348	99
7.974	900	12590	245	43	2950	280	59	3217	305	76	3500	332	93	3780	358	113
8.860	1000	12830	268	52	3130	297	70	3430	325	90	3650	346	110	3900	370	129
9.746	1100				3310	314	82	3590	340	107	3825	363	129	4050	384	149
10.632	1200				3540	336	102	3790	359	125	4050	384	149	4225	400	171
11.518	1300							3990	378	147	4220	400	171	4440	421	196
12.404	1400							4200	398	171	4420	419	198	4630	439	225
13.290	1500										4600	436	223	4800	455	254
14.176	1600										4750	450	248	4950	469	283
15.062	1700													5200	493	322
15.948	1800													5400	512	360
STATIC PRESSURE ➡	3 1/4"			2"			1"			1 1/4"			1 1/2"			
7.088	800	3950	374	119	4220	400	137	4480	425	158	4940	468	202	5370	509	252
7.974	900	4050	384	133	4290	407	155	4530	429	178	5000	474	225	5415	513	275
8.860	1000	4160	394	149	4400	417	175	4630	439	197	5075	481	248	5510	522	300
9.746	1100	4290	407	169	44520	428	194	4750	450	219	5170	490	270	5580	529	326
10.632	1200	4425	419	194	4650	441	219	4860	461	245	5250	499	298	5650	536	354
11.518	1300	4550	431	223	4780	453	248	4990	473	272	5390	511	327	5750	545	385
12.404	1400	4800	455	253	4980	472	279	5125	486	304	5520	523	358	5860	555	422
13.290	1500	4970	471	284	5180	491	312	5350	507	340	5640	535	397	5970	566	462
14.176	1600	5160	489	317	5380	510	353	5510	522	380	5800	550	442	6100	578	503
15.062	1700	5350	507	352	5540	525	386	5700	540	425	5990	568	490	6250	592	550
15.948	1800	5550	526	391	5710	541	428	5900	559	469	6200	588	542	6435	610	610
16.834	1900	5750	545	433	5920	561	470	6080	576	513	6390	606	592	6615	627	665
17.720	2000	5950	564	480	6080	576	513	6260	593	563	6560	622	645	6860	650	732
STATIC PRESSURE ➡	1 3/4"			2"			2 1/4"			2 1/2"			3"			
8.860	1000	5890	538	349	6240	591	405	6600	626	465	6910	655	527	7530	714	649
9.746	1100	5950	564	383	6290	596	439	6660	631	495	6970	661	563	7570	718	693
10.632	1200	6020	571	414	6370	604	473	6720	637	538	7030	666	602	7630	723	738
11.518	1300	6110	579	448	6455	612	507	6800	645	578	7100	681	645	7695	729	783
12.404	1400	6200	588	484	6550	621	550	6880	652	620	7180	681	693	7760	736	834
13.290	1500	6330	600	524	6635	629	594	6960	660	665	7260	688	735	7825	742	889
14.176	1600	6450	611	569	6750	640	642	7050	668	716	7350	697	789	7900	749	945
15.062	1700	6575	623	617	6865	651	691	7180	681	766	7450	706	844	7950	757	1010
15.948	1800	6720	637	675	7000	664	745	7290	691	820	7560	717	900	8100	768	1107
16.834	1900	6860	650	735	7140	677	805	7400	701	884	7680	728	961	8200	777	1214
17.720	2000	7080	671	808	7300	692	880	7560	717	958	7800	739	1040	8320	789	1312
19.492	2200	7450	706	940	7650	725	1012	7920	751	1111	8100	768	1120	8580	813	1513
21.264	2400	7800	739	1080	8100	768	1118	8250	782	1212	8450	801	1237	8850	839	156

All published ratings based on air at 70° F and 29.92" barometric pressure, and on tests in accordance with N.A.F.M. test code

TABLE 45

No. 44 SINGLE WIDTH SINGLE INLET FAN — TYPE BI

$$\text{Max. HP} = 44.5 \left(\frac{\text{RPM}}{1000} \right)^3$$

CIRCUM. = 11.65' WHEEL DIA. 44 1/2" OUTLET AREA = 10.8 SQ. FT.

STATIC PRESSURE ➡																					
CFM	OUTLET VEL.	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP					
6.480	600	12025	174	22	2430	209	38	2825	242	55	3185	273	72	3515	302	93					
7.560	700	12200	189	30	2562	220	44	2930	252	66	3275	281	84	3590	308	106					
8.640	800	12380	204	41	2755	236	58	3050	262	79	3375	290	97	3675	315	121					
9.720	900	12590	222	52	2950	253	72	3217	276	93	3500	300	114	3780	324	138					
10.800	1000	12830	243	63	3130	269	86	3430	294	110	3650	313	134	3900	335	157					
11.880	1100				3310	284	100	3590	308	130	3825	328	157	4050	348	182					
12.960	1200				3540	304	125	3790	325	153	4050	348	182	4225	363	209					
14.040	1300							3990	342	180	4220	362	210	4440	381	239					
15.120	1400							4200	361	208	4420	379	241	4630	397	275					
16.200	1500							4600	395	272	4800	412	310	5200	446	393					
17.280	1600							4750	408	302	4950	425	345	5400	464	440					
18.360	1700																				
19.440	1800																				
STATIC PRESSURE ➡																					
3"																					
7.8"																					
1"																					
1 1/4"																					
1 1/2"																					
3"																					
2"																					
2 1/4"																					
2 1/2"																					
3"																					
STATIC PRESSURE ➡																					
1 3/4"																					
10.800	1000	15890	506	4	26	16240	536	4	95	16600	567	5	68	16910	593	6	42	17530	646	7	91
11.880	1100	15950	511	4	67	16290	540	5	37	16660	572	6	04	16970	598	6	87	17570	650	8	46
12.960	1200	16020	517	5	06	16370	547	5	78	16720	577	6	66	17030	603	7	35	17630	655	9	56
14.040	1300	16110	524	5	47	16455	554	6	20	16800	584	7	05	17100	609	7	77	17695	661	9	56
15.120	1400	16200	532	5	81	16550	562	6	72	16880	591	7	56	17180	616	8	45	17760	666	10	2
16.200	1500	16330	543	6	04	16635	570	7	25	16960	597	8	11	17260	623	8	96	17825	672	10	8
17.280	1600	16450	554	6	90	16750	579	7	85	17050	605	8	21	17350	631	9	62	17900	678	11	5
18.360	1700	16575	564	7	54	16865	589	8	44	17180	616	9	35	17450	639	10	3	17990	686	12	2
19.440	1800	16720	577	8	25	17000	601	9	10	17290	626	10	0	17560	649	11	0	18100	695	13	9
20.520	1900	16860	589	8	98	17140	613	9	83	17400	635	10	8	17680	659	11	7	18200	704	13	9
21.600	2000	16980	601	9	85	17300	627	11	0	17760	649	11	7	17800	670	12	7	18320	716	14	7
23.760	2200	17450	639	11	5	17650	657	11	2	17920	680	13	7	18100	695	14	7	18580	736	16	7
25.920	2400	17800	670	13	2	18100	695	14	4	18250	708	15	7	18450	725	16	7	18850	760	19	0

TABLE 46

No. 49 SINGLE WIDTH SINGLE INLET FAN — TYPE BI

Max. HP = 72.5 $\left(\frac{\text{RPM}}{1000}\right)^3$

CIRCUM. = 12.83' WHEEL DIA. 49" OUTLET AREA = 13.09 SQ. FT.

STATIC PRESSURE ➡	1 8"		1 4"		3 8"		1 2"		5 8"	
	OUTLET VEL.	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed
7.854	600	12250	158	26	12430	189	46	12825	220	67
9.163	700	12200	171	37	12562	200	54	12930	228	80
10.472	800	12380	186	50	12755	215	70	13050	238	96
11.781	900	12590	202	63	12950	230	87	13217	251	113
13.090	1000	12830	221	76	13130	244	110	13430	267	133
14.399	1100	13100	241	90	13310	258	121	13590	280	151
15.708	1200	13400	261	104	13540	276	135	13790	295	165
17.017	1300	13700	281	118	13900	311	152	14220	329	193
18.326	1400	14000	301	132	14200	327	166	14420	345	213
19.635	1500	14300	321	146	14600	359	184	14600	359	230
20.944	1600	14600	341	160	14750	370	196	14750	370	248
22.253	1700	14900	361	174	15200	405	216	15200	405	266
23.562	1800	15200	381	188	15400	420	230	15400	420	284
STATIC PRESSURE ➡	3 4"		7 8"		1"		1 1 4"		1 1 2"	
	OUTLET VEL.	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed
10.472	800	13950	308	175	14201	329	2.03	14480	349	2.33
11.781	900	14050	316	196	14290	334	2.29	14530	353	2.63
13.090	1000	14160	324	220	14400	343	2.59	14630	361	2.90
14.399	1100	14290	334	250	14520	352	2.86	14740	370	3.24
15.708	1200	14425	345	281	14650	362	3.24	14860	379	3.62
17.017	1300	14550	355	329	14780	373	3.66	14990	389	4.03
18.326	1400	14800	374	371	14980	388	4.12	15125	399	4.49
19.635	1500	14970	387	421	15180	404	4.62	15350	417	5.03
20.944	1600	15160	402	470	15380	419	5.21	15510	429	5.62
22.253	1700	15350	417	522	15540	432	5.70	15700	444	6.29
23.562	1800	15550	433	580	15710	445	6.33	15900	460	6.95
24.871	1900	15750	448	640	15920	461	6.96	16080	474	7.60
26.180	2000	15950	464	712	16080	474	7.60	16260	488	8.35
STATIC PRESSURE ➡	1 3 4"		2"		2 1 4"		2 1 2"		3"	
	OUTLET VEL.	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed	HP	Tip Speed
13.090	1000	15890	459	516	16220	486	6.00	16600	514	6.88
14.399	1100	15950	464	566	16290	490	6.49	16660	521	7.31
15.708	1200	16020	469	612	16370	496	6.99	16720	524	7.75
17.017	1300	16110	476	662	16455	503	7.49	16800	536	8.15
18.326	1400	16200	483	715	16550	511	8.12	16880	536	8.55
19.635	1500	16320	493	775	16635	517	8.79	16960	542	9.82
20.944	1600	16450	503	835	16750	526	9.50	17050	549	10.6
22.253	1700	16575	512	912	16865	535	10.2	17180	560	11.3
23.562	1800	16720	524	1000	17000	546	11.0	17290	568	12.1
24.871	1900	16860	535	1087	17140	557	11.9	17400	577	13.1
26.180	2000	17080	552	119	17300	569	13.0	17560	589	14.2
27.489	2200	17450	581	135	17650	596	15.2	17920	617	16.4
28.798	2400	17800	608	160	18100	631	17.5	18500	643	19.0
30.107	2600	18150	631	175	18500	658	19.7	18950	669	20.3
31.416	2800	18450	658	190	18900	686	22.0	19350	695	22.3

BI - SWSI

TABLE 48

No. 60 SINGLE WIDTH SINGLE INLET FAN — TYPE BI

$$\text{Max. HP} = 200 \left(\frac{\text{RPM}}{1000} \right)^3$$

CIRCUM. = 15.71' WHEEL DIA. 60" OUTLET AREA = 19.63 SQ. FT.

STATIC PRESSURE ➡		1' 8"	1' 4"	3' 8"	1' 2"	5' 8"
CFM	OUTLET VEL	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM
11 731	600	2025	129	40	2430	155
13 745	700	2200	140	56	2562	163
15 708	800	2380	152	76	2755	175
17 672	900	2500	165	96	2950	186
19 635	1000	2630	180	112	3130	199
21 598	1100				3310	211
23 462	1200				3540	225
25 325	1300					
27 489	1400				3990	254
29 452	1500				4200	267
31 416	1600					
33 380	1700				4750	302
35 344	1800					
STATIC PRESSURE ➡		3' 4"	7' 8"	1' 1"	1' 4"	1 1/2"
15 708	800	3950	251	2	60	4220
17 672	900	4050	258	2	96	4290
19 635	1000	4160	265	3	32	4400
21 598	1100	4270	273	3	72	4520
23 462	1200	4425	282	4	32	4650
25 325	1300	4550	290	4	92	4780
27 489	1400	4800	305	5	60	4980
29 452	1500	4970	317	6	20	5180
31 416	1600	5160	329	7	00	5380
33 380	1700	5350	341	7	80	5540
35 344	1800	5550	353	8	60	5710
37 307	1900	5750	366	9	60	5920
39 270	2000	5950	379	10	6	6080
STATIC PRESSURE ➡		1' 3' 4"	2"	2' 3' 4"	2' 1' 2"	3"
19 635	1000	5890	375	7	72	6240
21 598	1100	5950	379	8	48	6290
23 462	1200	6020	384	9	20	6370
25 325	1300	6110	389	9	92	6455
27 489	1400	6200	395	10	7	6550
29 452	1500	6330	403	11	7	6635
31 416	1600	6450	411	12	6	6750
33 380	1700	6575	419	13	7	6865
35 344	1800	6720	428	15	0	7000
37 307	1900	6860	437	16	3	7140
39 270	2000	7080	451	17	8	7300
43 196	2200	7450	474	20	8	7650
46 932	2400	7800	497	24	0	8100

All published ratings based on air at 70° F and 29.92" barometric pressure, and on tests in accordance with N.A.F.M. test code.

TABLE 49

No. 66 SINGLE WIDTH SINGLE INLET FAN — TYPE BI

$$\text{Max. HP} = 322 \left(\frac{\text{RPM}}{1000} \right)^3$$

CIRCUM. = 17.28' WHEEL DIA. 66" OUTLET AREA = 23.75 SQ. FT.

STATIC PRESSURE ➡		1' 8"	1' 4"	3' 8"	1' 2"	5' 8"
CFM	OUTLET VEL	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM
14 256	600	2025	117	48	2430	140
16 632	700	2200	127	68	2562	149
19 008	800	2380	138	92	2755	159
21 384	900	2500	150	112	2950	170
23 760	1000	2630	164	136	3130	181
26 136	1100				3310	192
28 512	1200				3540	205
30 888	1300					
33 264	1400					
35 640	1500					
38 016	1600					
40 392	1700					
42 768	1800					
STATIC PRESSURE ➡		3' 4"	7' 8"	1' 1"	1' 4"	1' 2"
19 008	800	3950	228	3	20	4220
21 384	900	4050	235	3	60	4290
23 760	1000	4160	242	4	00	4400
26 136	1100	4290	248	4	56	4520
28 512	1200	4425	256	5	24	4650
30 888	1300	4550	263	6	00	4780
33 264	1400	4800	278	6	80	4980
35 640	1500	4970	287	7	60	5180
38 016	1600	5160	298	8	48	5380
40 392	1700	5350	309	9	36	5540
42 768	1800	5550	321	10	5	5710
45 144	1900	5750	333	11	6	5920
47 520	2000	5950	345	12	9	6080
STATIC PRESSURE ➡		1' 3' 4"	2"	2' 3' 4"	2' 1' 2"	3"
23 760	1000	5890	341	9	40	6240
26 136	1100	5950	345	10	3	6290
28 512	1200	6020	349	11	1	6370
30 888	1300	6110	354	12	0	6455
33 264	1400	6260	359	13	0	6550
35 640	1500	6330	366	14	0	6635
38 016	1600	6450	374	15	2	6735
40 392	1700	6575	381	16	6	6865
42 768	1800	6720	389	18	1	7000
45 144	1900	6860	397	19	8	7140
47 520	2000	7080	409	21	6	7300
52 272	2200	7450	431	25	2	7650
57 024	2400	7800	452	30	0	8100

TABLE 50

No. 15 DOUBLE WIDTH DOUBLE INLET FAN — TYPE BI

$$\text{Max. HP} = .39 \left(\frac{\text{RPM}}{1000} \right)^3$$

CIRCUM. = 3.93' WHEEL DIA. 15" OUTLET AREA = 2.18 SQ. FT.

STATIC PRESSURE ➡		1/8"		1/4"		3/8"		1/2"		5/8"						
CFM	OUTLET VEL.	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP	Tip Speed	RPM	HP			
1309	600	1970	501	.05	2415	614	.08	2780	708	.11	3125	795	.15	3455	878	.20
1525	700	2150	548	.06	2560	651	.10	2905	739	.14	3215	819	.18	3515	894	.23
1745	800	2340	595	.08	2710	690	.12	3050	776	.17	3345	851	.21	3630	925	.26
1962	900	2540	646	.10	2860	728	.14	3190	811	.20	3490	888	.24	3770	959	.30
2180	1000	2750	700	.13	3070	782	.17	3345	851	.23	3640	927	.28	3910	998	.35
2400	1100				3255	828	.21	3520	895	.27	3790	965	.33	4055	1032	.40
2618	1200				3445	877	.26	3700	942	.31	3945	1004	.38	4195	1067	.45
2835	1300				3600	933	.36	4120	1049	.44	4350	1107	.51			
3050	1400							4105	1045	.42	4310	1098	.50	4505	1147	.57
3270	1500										4500	1145	.57	4680	1190	.65
3490	1600										4690	1192	.65	4875	1240	.72
3708	1700													5065	1289	.80
3925	1800													5255	1337	.89
STATIC PRESSURE ➡		3/4"		7/8"		1"		1 1/4"		1 1/2"						
1745	800	3890	.991	.31	4145	1055	.37	4405	1121	.43	4875	1240	.56	5300	1349	.71
1962	900	4025	1026	.35	4215	1073	.41	4450	1127	.46	4915	1250	.60	5340	1360	.75
2180	1000	4170	1063	.40	4345	1106	.45	4560	1160	.51	4990	1270	.65	5390	1371	.80
2400	1100	4295	1091	.46	4475	1131	.51	4685	1191	.57	5070	1291	.71	5460	1390	.81
2618	1200	4430	1122	.52	4610	1174	.58	4830	1229	.64	5220	1329	.78	5560	1415	.92
2835	1300	4560	1160	.58	4760	1212	.65	4975	1266	.72	5340	1360	.86	5675	1445	.91
3050	1400	4710	1202	.65	4915	1250	.72	5125	1304	.80	5480	1395	.95	5815	1480	1.11
3270	1500	4865	1238	.72	5075	1292	.80	5265	1357	.88	5630	1433	1.05	5955	1515	1.22
3490	1600	5040	1281	.80	5235	1332	.88	5420	1379	.97	5775	1470	1.15	6095	1550	1.33
3708	1700	5225	1330	.89	5410	1378	.98	5585	1421	1.07	5930	1509	1.26	6235	1589	1.44
3925	1800	5420	1380	.99	5595	1424	1.08	5760	1466	1.18	6085	1548	1.33	6380	1624	1.56
4145	1900	5615	1429	1.10	5795	1475	1.20	5945	1513	1.31	6240	1588	1.50	6520	1660	1.71
4360	2000	5840	1485	1.22	5995	1526	1.33	6130	1560	1.45	6405	1630	1.65	6690	1702	1.85
STATIC PRESSURE ➡		1 3/4"		2"		2 1/4"		2 1/2"		3"						
2180	1000	5800	1.476	.96	6160	1.567	1.12	6500	1.655	1.30	6850	1.745	1.46	7470	1.901	1.82
2400	1100	5830	1.483	1.03	6195	1.577	1.19	6535	1.664	1.37	6880	1.751	1.53	7500	1.908	1.91
2618	1200	5900	1.501	1.10	6250	1.590	1.26	6590	1.676	1.45	6915	1.759	1.62	7535	1.917	2.01
2835	1300	6015	1.531	1.18	6325	1.609	1.34	6660	1.695	1.53	6960	1.771	1.72	7575	1.927	2.12
3050	1400	6140	1.562	1.28	6425	1.635	1.44	6745	1.716	1.64	7030	1.787	1.83	7620	1.939	2.23
3270	1500	6275	1.596	1.39	6545	1.666	1.57	6845	1.744	1.77	7135	1.851	1.95	7695	1.958	2.36
3490	1600	6420	1.634	1.51	6690	1.702	1.70	6965	1.772	1.90	7260	1.847	2.08	7780	1.980	2.51
3708	1700	6565	1.671	1.64	6840	1.743	1.84	7105	1.808	2.04	7395	1.882	2.24	7895	2.009	2.67
3925	1800	6710	1.711	1.71	6985	1.776	1.98	7255	1.846	2.19	7535	1.917	2.40	8050	2.049	2.84
4145	1900	6860	1.748	1.90	7130	1.814	2.12	7405	1.884	2.35	7680	1.954	2.56	8200	2.087	3.03
4360	2000	7010	1.782	2.07	7275	1.851	2.28	7555	1.922	2.51	7830	1.990	2.75	8340	2.122	3.22
4580	2200	7330	1.855	2.40	7580	1.928	2.62	7845	1.996	2.86	8110	2.063	3.11	8610	2.191	3.63
5235	2400	7660	1.949	2.77	7895	2.009	3.01	8140	2.071	3.28	8395	2.137	3.54	8860	2.254	4.08

TABLE 51

No. 18 DOUBLE WIDTH DOUBLE INLET FAN — TYPE BI

$$\text{Max. HP} = .96 \left(\frac{\text{RPM}}{1000} \right)^3$$

CIRCUM. = 4.71' WHEEL DIA. 18" OUTLET AREA = 3.12 SQ. FT.

STATIC PRESSURE ➡		1/8"		1/4"		3/8"		1/2"		5/8"						
CFM	OUTLET VEL.	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP					
1872	600	1970	.419	.07	2415	.512	.11	2780	.590	.16	3125	.663	.22	3455	.734	.29
2184	700	2150	.457	.09	2560	.544	.14	2905	.617	.20	3215	.682	.26	3515	.747	.33
2496	800	2340	.498	.11	2710	.576	.17	3050	.647	.24	3345	.710	.30	3630	.771	.37
2808	900	2540	.540	.14	2860	.612	.21	3190	.677	.28	3490	.741	.35	3770	.800	.43
3120	1000	2750	.584	.18	3070	.651	.25	3345	.710	.33	3640	.772	.41	3910	.830	.50
3432	1100				3255	.691	.30	3520	.747	.39	3790	.804	.47	4055	.861	.57
3744	1200				3445	.732	.36	3700	.786	.45	3945	.838	.54	4195	.891	.64
4056	1300							3900	.828	.52	4120	.875	.63	4350	.923	.73
4368	1400							4105	.871	.61	4310	.915	.72	4505	.957	.82
4680	1500										4500	.956	.82	4680	.994	.93
4992	1600										4690	.996	.93	4875	1.035	1.04
5304	1700													5065	1.075	1.16
5616	1800													5255	1.116	1.29
STATIC PRESSURE ➡		3/4"		7/8"		1"		1 1/4"		1 1/2"						
2496	800	3890	.826	.44	4145	.880	.53	4405	.935	.62	4675	1.035	.81	5300	1.125	1.02
2808	900	4025	.855	.50	4215	.925	.58	4495	.945	.67	4715	1.044	.87	5340	1.134	1.08
3120	1000	4170	.887	.58	4345	.922	.65	4560	.968	.74	4790	1.059	.94	5390	1.144	1.15
3432	1100	4295	.914	.66	4475	.950	.74	4685	.995	.82	4900	1.076	1.02	5460	1.159	1.23
3744	1200	4430	.941	.74	4610	.979	.83	4830	1.025	.92	5020	1.081	1.12	5560	1.180	1.33
4056	1300	4560	.968	.83	4760	1.010	.93	4975	1.056	1.03	5140	1.134	1.24	5675	1.205	1.45
4368	1400	4710	1.000	.93	4915	1.044	1.04	5125	1.088	1.15	5280	1.164	1.37	5815	1.234	1.59
4680	1500	4865	1.033	1.04	5075	1.077	1.15	5265	1.111	1.27	5430	1.195	1.51	5955	1.264	1.75
4992	1600	5040	1.071	1.15	5235	1.112	1.27	5420	1.151	1.40	5575	1.226	1.66	6095	1.294	1.91
5304	1700	5225	1.110	1.28	5410	1.149	1.41	5585	1.186	1.54	5730	1.259	1.81	6235	1.324	2.07
5616	1800	5420	1.149	1.42	5595	1.188	1.56	5760	1.223	1.70	5905	1.292	1.98	6380	1.354	2.25
5928	1900	5615	1.192	1.58	5795	1.230	1.73	5945	1.262	1.88	6240	1.325	2.16	6520	1.384	2.45
6240	2000	5840	1.240	1.76	5995	1.273	1.92	6130	1.302	2.08	6405	1.360	2.37	6690	1.420	2.66
STATIC PRESSURE ➡		1 3/4"		2"		2 1/4"		2 1/2"		3"						
3120	1000	5800	1.231	.39	6160	1.308	1.62	6500	1.380	1.87	6850	1.454	2.11	7470	1.586	2.63
3432	1100	5830	1.238	.48	6195	1.315	.71	6535	1.387	1.97	6880	1.461	2.21	7500	1.592	2.76
3744	1200	5900	1.253	.58	6250	1.327	.81	6590	1.399	2.09	6915	1.468	2.34	7535	1.600	2.90
4056	1300	6015	1.275	.67	6325	1.343	.93	6660	1.414	2.21	6960	1.478	2.48	7575	1.608	3.05
4368	1400	6140	1.304	.78	6425	1.364	1.08	6745	1.435	2.37	7030	1.493	2.63	7620	1.618	3.22
4680	1500	6275	1.332	.90	6545	1.390	1.26	6845	1.453	2.55	7135	1.515	2.81	7695	1.633	3.41
4992	1600	6420	1.363	1.08	6690	1.420	1.45	6965	1.479	2.74	7260	1.542	3.01	7780	1.652	3.62
5304	1700	6565	1.394	1.26	6840	1.452	1.65	7105	1.509	2.94	7395	1.570	3.23	7895	1.676	3.85
5616	1800	6710	1.425	1.56	6985	1.483	1.85	7255	1.540	3.15	7535	1.600	3.46	8050	1.710	4.10
5928	1900	6860	1.456	1.77	7130	1.514	2.06	7405	1.572	3.38	7680	1.630	3.70	8200	1.745	4.37
6240	2000	7010	1.488	2.08	7275	1.545	2.29	7555	1.604	3.62	7830	1.660	3.96	8340	1.774	4.64
6864	2200	7330	1.556	2.46	7580	1.609	2.78	7845	1.666	4.12	8110	1.722	4.49	8610	1.828	5.23
7488	2400	7660	1.626	2.99	7895	1.676	3.34	8140	1.728	4.72	8395	1.782	5.10	8860	1.882	5.88

All published ratings based on air at 70° F. and 29.92" barometric pressure, and on tests in accordance with N.A.F.M. test code.

BI - DWDI

BI - DWDI

TABLE 52

No. 21 DOUBLE WIDTH DOUBLE INLET FAN — TYPE BI

$$\text{Max. HP} = 2.1 \left(\frac{\text{RPM}}{1000} \right)^3$$

CIRCUM. = 55" WHEEL DIA. 21" OUTLET AREA = 4.25 SQ. FT.

STATIC PRESSURE ➔																
CFM	WFL	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed
2550	600	1970	334	09	12415	439	15	12780	505	27	13125	568	30	13455	628	39
2875	700	2150	341	12	12560	466	19	12905	528	27	13215	585	35	13515	639	45
3470	800	2340	423	15	12710	493	23	13050	555	32	13345	610	41	13630	660	50
3925	900	2540	462	19	12860	520	28	13190	580	38	13490	634	48	13770	686	58
4250	1000	2750	500	24	13070	556	34	13345	610	45	13640	662	56	13910	711	68
4675	1100				13255	592	41	13520	640	53	13790	689	64	14055	737	78
5100	1200				13445	626	48	13700	672	61	13945	717	73	14195	763	87
5525	1300							13900	709	71	14120	750	85	14350	791	99
5950	1400							14055	746	83	14310	7831	98	14505	820	102
6375	1500										14500	819	112	14680	851	127
6800	1600										14600	853	127	14875	886	141
7225	1700													15065	921	158
7650	1800													15255	954	175
STATIC PRESSURE ➔																
CFM	WFL	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed
3470	800	3690	709	60	14145	753	72	14405	801	84	14875	887	110	15300	964	139
3625	900	4025	731	66	14215	767	79	14450	809	91	14915	894	118	15340	971	147
4250	1000	4170	759	79	14345	790	88	14560	831	110	14990	908	128	15390	980	156
4675	1100	4295	781	90	14475	814	101	14685	852	112	15020	921	139	15460	993	167
5100	1200	4430	806	101	14610	838	113	14800	878	125	15220	949	152	15560	1031	181
5525	1300	4560	831	113	14760	865	127	14975	905	140	15340	971	169	15675	1033	197
5950	1400	4710	856	127	14915	893	141	15125	931	156	15480	996	186	15815	1058	216
6375	1500	4865	885	141	15075	922	156	15265	956	173	15630	1025	205	15955	1083	238
6800	1600	5040	917	156	15235	951	173	15420	986	190	15750	1051	226	16095	1108	260
7225	1700	5225	950	174	15410	984	192	15585	1016	209	15930	1078	246	16235	1134	282
7650	1800	5420	986	191	15595	1017	212	15760	1048	231	16085	1106	269	16380	1160	306
8075	1900	5615	1022	215	15795	1054	235	15945	1081	255	16240	1135	294	16520	1186	333
8500	2000	5840	1062	239	15995	1091	261	16130	1114	283	16405	1164	322	16690	1216	362
STATIC PRESSURE ➔																
CFM	WFL	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed
4250	1000	5800	1055	1189	16160	1120	220	16500	1182	254	16850	1245	287	17470	1358	358
4675	1100	5830	1062	01	16195	1126	233	16535	1189	268	16880	1251	301	17500	1364	376
5100	1200	5900	1073	215	16250	1137	246	16590	1198	284	16915	1257	318	17535	1370	395
5525	1300	5915	1094	231	16325	1150	262	16660	1211	301	16965	1265	337	17575	1377	415
5950	1400	6140	1116	250	16425	1168	283	16745	1227	323	17030	1278	358	17620	1385	437
6375	1500	6275	1142	272	16545	1189	307	16845	1244	347	17135	1297	382	17695	1399	463
6800	1600	6420	1167	296	16690	1216	333	16965	1266	373	17260	1320	414	17780	1415	492
7225	1700	6565	1193	321	16840	1243	360	17150	1292	404	17395	1344	440	17895	1435	524
7650	1800	6710	1230	348	16985	1269	388	17255	1319	429	17535	1370	471	18050	1464	558
8075	1900	6860	1257	377	17130	1296	416	17405	1346	460	17680	1396	503	18200	1491	595
8500	2000	7010	1274	405	17275	1323	447	17555	1373	492	17820	1422	538	18340	1516	631
9350	2200	7330	1333	470	17800	1378	514	17845	1427	514	18110	1475	611	18610	1565	711
9000	2400	7660	1392	545	18195	1435	590	18401	1480	642	18395	1526	694	18610	1616	780

All published ratings based on air at 70° F. and 29.92" barometric pressure, and on tests in accordance with N.A.F.M. test code.

TABLE 53

No. 24 DOUBLE WIDTH DOUBLE INLET FAN — TYPE BI

$$\text{Max. HP} = 4.1 \left(\frac{\text{RPM}}{1000} \right)^3$$

CIRCUM. = 6.283' WHEEL DIA. 24" OUTLET AREA = 6.05 SQ. FT.

STATIC PRESSURE ➔																
CFM	OUTLET V/F	Tip Speed	RPM	HP	Tip Speed	RPM	HP	1 1/4"	3/8"	1 1/2"	Tip Speed	RPM	HP	Tip Speed	RPM	HP
3630	600	1975	314	13	2390	380	21	2770	441	30	3130	498	41	3460	551	54
4230	700	2160	344	17	2535	403	26	2885	459	36	3220	512	47	3520	560	62
4840	800	2375	378	22	2700	430	32	3015	480	43	3335	531	54	3610	575	67
5445	900	2560	407	28	2885	459	40	3180	506	51	3470	552	63	3725	593	76
6050	1000	2800	446	35	3075	489	48	3350	533	61	3610	575	74	3865	615	88
6655	1100				3270	520	57	3530	562	72	3775	601	86	4015	639	102
7260	1200				3460	551	68	3720	592	84	3950	629	100	4175	664	117
7865	1300				3630	582	80	3910	624	99	4130	657	114	4340	691	133
8465	1400				3820	611	92	4120	656	115	4320	688	132	4520	719	152
9065	1500				4010	640	104	4300	687	126	4490	719	142	4710	750	172
9665	1600				4200	669	116	4480	718	137	4660	750	152	4900	780	195
10265	1700				4390	698	128	4670	749	148	4830	781	162	5090	810	218
10865	1800				4580	727	140	4880	780	159	5000	812	172	5280	840	241
11465	1900				4770	756	152	5090	811	170	5170	843	182	5470	870	264
12065	2000				4960	785	164	5290	842	181	5340	874	192	5660	900	287
12665	2100				5150	814	176	5490	873	192	5510	905	202	5850	930	310
13265	2200				5340	843	188	5690	904	203	5680	936	212	6040	960	333
13865	2300				5530	872	200	5890	935	214	5850	967	222	6230	990	356
14465	2400				5720	901	212	6090	966	225	6020	998	232	6420	1020	379
15065	2500				5910	930	224	6290	997	236	6190	1029	242	6610	1050	402
15665	2600				6100	959	236	6490	1028	247	6360	1060	252	6800	1080	425
16265	2700				6290	988	248	6690	1059	258	6530	1091	262	6990	1110	448
16865	2800				6480	1017	260	6890	1090	269	6700	1122	272	7180	1140	471
17465	2900				6670	1046	272	7090	1121	280	6870	1153	282	7370	1170	494
18065	3000				6860	1075	284	7290	1152	291	7040	1184	292	7560	1200	517
18665	3100				7050	1104	296	7490	1183	302	7210	1215	302	7750	1230	540
19265	3200				7240	1133	308	7690	1214	313	7380	1246	312	7940	1260	563
19865	3300				7430	1162	320	7890	1245	324	7550	1277	322	8130	1290	586
20465	3400				7620	1191	332	8090	1276	335	7720	1308	332	8320	1320	609
21065	3500				7810	1220	344	8290	1307	346	7890	1339	342	8510	1350	632
21665	3600				8000	1249	356	8490	1338	357	8060	1370	352	8690	1380	655
22265	3700				8190	1278	368	8690	1367	368	8230	1401	362	8870	1410	678
22865	3800				8380	1307	380	8890	1396	379	8400	1432	373	9050	1440	701
23465	3900				8570	1336	392	9090	1425	390	8570	1463	384	9230	1470	724
24065	4000				8760	1365	404	9290	1454	401	8740	1494	395	9410	1500	747
24665	4100				8950	1394	416	9490	1483	412	8910	1525	406	9590	1530	770
25265	4200				9140	1423	428	9690	1512	423	9100	1556	417	9770	1560	793
25865	4300				9330	1452	440	9890	1541	434	9300	1587	428	9950	1590	816
26465	4400				9520	1481	452	10090	1570	445	9490	1618	439	10130	1620	839
27065	4500				9710	1510	464	10290	1600	456	9680	1649	450	10310	1650	862
27665	4600				9900	1539	476	10490	1630	467	9870	1680	461	10490	1680	885
28265	4700				10090	1568	488	10690	1660	478	10060	1711	472	10670	1710	908
28865	4800				10280	1597	500	10890	1690	489	10250	1742	483	10850	1740	931
29465	4900				10470	1626	512	11090	1720	500	10440	1773	494	11030	1770	954
30065	5000				10660	1655	524	11290	1750	511	10630	1804	505	11210	1800	977
30665	5100				10850	1684	536	11490	1780	522	10820	1835	516	11390	1830	1000
31265	5200				11040	1713	548	11690	1810	533	11010	1866	527	11570	1860	1023
31865	5300				11230	1742	560	11890	1840	544	11200	1897	538	11750	1890	1046
32465	5400				11420	1771	572	12090	1870	555	11390	1928	549	11930	1920	1069
33065	5500				11610	1800	584	12290	1900	566	11580	1959	560	12110	1950	1092
33665	5600				11800	1829	596	12490	1930	577	11770	1990	571	12290	1980	1115
34265	5700				11990	1858	608	12690	1960	588	11960	2021	582	12470	2010	1138
34865	5800				12180	1887	620	12890	1990	599	12150	2052	593	12650	2040	1161
35465	5900				12370	1916	632	13090	2020	610	12340	2083	604	12830	2070	1184
36065	6000				12560	1945	644	13290	2050	621	12530	2114	615	13010	2100	1207
36665	6100				12750	1974	656	13490	2080	632	12720	2145	626	13190	2130	1230
37265	6200				12940	2003	668	13690	2110	643	12910	2176	637	13370	2160	1253
37865	6300				13130	2032	680	13890	2140	654	13100	2207	648	13550	2190	1276
38465	6400				13320	2061	692	14090	2170	665	13290	2238	659	13730	2220	1299
39065	6500				13510	2090	704	14290	2200	676	13480	2269	670	13910	2250	1322
39665	6600				13700	2119	716	14490	2230	687	13670	2300	681	14090	2280	1345
40265	6700				13890	2148	728	14690	2260	698	13860	2331	692	14270	2310	1368
40865	6800				14080	2177	740	14890	2290	709	14050	2362	703	14450	2340	1391
41465	6900				14270	2206	752	15090	2320	720	14240	2393	714	14630	2370	1414
42065	7000				14460	2235	764	15290	2350	731	14430	2424	725	14810	2400	1437
42665	7100				14650	2264	776	15490	2380	742	14620	2455	736	15000	2430	1460
43265	7200				14840	2293	788	15690	2410	753	14810	2486	747	15180	2460	1483
43865	7300				15030	2322	800	15890	2440	764	15000	2517	758	15360	2490	1506
44465	7400				15220	2351	812	16090	2470	775	15190	2548	769	15540	2520	1529
45065	7500				15410	2380	824	16290	2500	786	15380	2579	780	15720	2550	1552
45665	7600				15600	2409	836	16490	2530	797	15570	2610	791	15900	2580	1575
46265	7700				15790	2438	848	16690	2560	808	15760	2641	802	16080	2610	1598
46865	7800				15980	2467	860	16890	2590	819	15950	2672	813	16260	2640	1621
47465	7900				16170	2496	872	17090	2620	830	16140	2703	824	16440	2670	1644
48065	8000				16360	2525	884	17290	2650	841	16330	2734	835	16620	2700	1667
48665	8100				16550	2554	896	17490	2680	852	16520	2765	846	16800	2730	1690
49265	8200				16740	2583	908	17690	2710	863	16710	2796	857	16980	2760	1713
49865	8300				16930	2612	920	17890	2740	874	16900	2827	868	17160	2790	1736
50465	8400				17120	2641	932	18090	2770	885	17090	2858	879	17340	2820	1759
51065	8500				17310	2670	944	18290	2800	896	17280	2889	890	17520	2850	1782
51665	8600				17500	2699	956	18490	2830	907	17470	2920	901	17700	2880	1805
52265	8700				17690	2728	968	18690	2860	918	17660	2951	912	17880	2910	1828
52865	8800				17880	2757	980	18890	2890	929	17850	2982	923	18060	2940	1851
53465	8900				18070	2786	992	19090	2920	940	18040	3013	934	18240	2970	1874
54065	9000				18260	2815	1004	19290	2950	951	18230	3044	945	18420	3000	1897
54665	9100				18450	2844	1016	19490	2980	962	18420	3075	956	18600	3030	1920
55265	9200				18640	2873	1028	19690	3010	973	18610	3106	967	18		

TABLE 54

No. 27 DOUBLE WIDTH DOUBLE INLET FAN — TYPE BI

Max. HP = $7.4 \left(\frac{\text{RPM}}{1000} \right)^3$

CIRCUM. = 7.07' WHEEL DIA. 27" OUTLET AREA = 7.50 SQ. FT.

STATIC PRESSURE →																			
		1/8"	1/4"	3/8"	1/2"	5/8"					1/8"	1/4"	3/8"	1/2"	5/8"				
CFM	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed	Tip Speed
VEL.	RPM	RPM	RPM	RPM	RPM	RPM	HP	HP	HP	HP	HP	HP	HP	HP	HP	HP	HP	HP	HP
4,500	600	11975	2801	17	2390	3921	38	3130	443	52	3460	4891	68						
5,250	700	2160	306	22	2535	3581	33	2885	4081	46	3220	4551	60	3520	4981	76			
6,000	800	2375	3361	28	2700	3821	41	3015	4271	54	3335	4721	69	3610	5111	85			
6,750	900	2560	3621	35	2885	4071	51	3180	4491	64	3470	4911	80	3725	5281	96			
7,500	1000	2800	3961	44	3075	4351	61	3350	4741	77	3610	5111	94	3865	5471	112			
8,250	1100				3270	4621	72	3530	5001	91	3775	5341	110	4015	5671	129			
9,000	1200				3460	4891	86	3720	5271	107	3950	5591	126	4175	5891	147			
9,750	1300				3920	5551	125	4130	5841	144	4340	6141	169						
10,500	1400				4120	5831	145	4330	6111	165	4520	6391	192						
11,250	1500							4530	6411	192	4710	6661	216						
12,000	1600							4750	6721	222	4900	6931	246						
12,750	1700										5100	7212	278						
13,500	1800										5310	7513	312						
STATIC PRESSURE →																			
		3/4"	1"	1 1/4"	1 1/2"	1 3/4"					3/4"	1"	1 1/4"	1 1/2"	1 3/4"				
6,000	800	3890	5501	1.02	14150	5871	1.23	4400	6221	1.43	4860	6871	1.86	5280	7471	2.33			
6,750	900	3990	5641	1.15	14220	5971	1.34	4450	6291	1.54	4910	6941	2.01	5330	7541	2.50			
7,500	1000	4110	5811	1.30	14330	6121	1.51	4530	6411	1.70	4980	7041	2.15	5400	7641	2.66			
8,250	1100	4240	6001	1.48	14450	6291	1.68	4650	6581	1.89	5075	7181	2.33	5470	7741	2.84			
9,000	1200	4380	6201	1.68	14580	6481	1.87	4780	6761	2.09	5170	7311	2.57	5550	7851	3.05			
9,750	1300	4520	6391	1.89	14720	6681	2.10	4920	6961	2.34	5290	7481	2.85	5650	7991	3.33			
10,500	1400	4680	6612	2.14	14880	6901	2.37	5070	7171	2.63	5425	7671	3.10	5770	8161	3.62			
11,250	1500	4855	6872	2.40	15050	7141	2.66	5230	7401	2.94	5580	7891	3.43	5890	8331	3.95			
12,000	1600	5050	7142	2.68	15230	7401	2.96	5400	7641	3.26	5740	8121	3.80	6030	8531	4.31			
12,750	1700	5250	7431	3.00	15410	7651	3.32	5580	7891	3.62	5910	8361	4.18	6190	8761	4.73			
13,500	1800	5450	7713	3.36	15600	7921	3.70	5770	8161	4.00	6090	8611	4.59	6360	9001	5.19			
14,250	1900	5655	8003	3.74	15810	8221	4.10	5960	8431	4.42	6275	8881	5.02	6530	9241	5.70			
15,000	2000	5860	8291	4.20	16040	8541	4.53	6150	8701	4.87	6430	9091	5.49	6700	9481	6.20			
STATIC PRESSURE →																			
		1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"					1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"				
7,500	1000	5790	819	3.20	16150	8701	3.72	6490	9181	4.32	6820	9651	4.85	10071	10571	6.23			
8,250	1100	5920	8281	3.37	16200	8771	3.95	6540	9251	4.57	6865	9711	5.10	10170	10681	6.41			
9,000	1200	5920	8371	3.59	16260	8851	4.19	6600	9341	4.82	6920	9791	5.44	10270	10741	6.70			
9,750	1300	6005	8491	3.87	16345	8971	4.44	6680	9451	5.06	6975	9871	5.76	10370	10771	7.06			
10,500	1400	6110	8641	4.19	16440	9111	4.75	6780	9591	5.34	7040	9961	6.07	10470	10791	7.42			
11,250	1500	6230	8811	4.53	16550	9261	5.10	6880	9731	5.74	7120	10071	6.40	10570	10891	7.79			
12,000	1600	6360	9001	4.91	16670	9431	5.50	6980	9871	6.16	7220	10271	6.78	10670	11001	8.20			
12,750	1700	6500	9191	5.46	16800	9621	5.92	7090	10031	6.60	7320	10351	7.19	10770	11131	8.69			
13,500	1800	6650	9411	5.83	16940	9821	6.40	7210	10201	7.06	7450	10541	7.66	10870	11291	9.25			
14,250	1900	6800	9621	6.34	17080	10011	6.93	7340	10381	7.58	7500	10741	8.21	10970	11461	9.81			
15,000	2000	6960	9841	6.89	17220	10211	7.53	7480	10581	8.26	7570	10931	8.93	11070	11631	10.4			
16,500	2200	7300	10331	8.05	17550	10681	8.80	7800	11031	9.58	8030	11361	9.83	11480	11991	11.8			
18,000	2400	7650	10821	9.40	17890	11161	10.1	8120	11491	10.9	8340	11801	11.7	11760	12391	13.4			

All published ratings based on air at 70° F. and 29.92" barometric pressure, and on tests in accordance with N.A.F.M. test code.

BI — DWDI

TABLE 55

No. 30 DOUBLE WIDTH DOUBLE INLET FAN — TYPE BI

Max. HP = $12.5 \left(\frac{\text{RPM}}{1000} \right)^3$

CIRCUM. = 7.85' WHEEL DIA. 30" OUTLET AREA = 9.25 SQ. FT.

STATIC PRESSURE →																			
		1/8"		1/4"		3/8"		1/2"		5/8"									
CFM	Tip Speed VEL.	Tip RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP	Tip Speed RPM	HP
5,550	600	11975	252	20	2390	304	33	2770	353	47	3130	399	64	3460	441	84			
6,475	700	12160	275	27	2535	322	41	2885	368	56	3320	416	73	3520	447	94			
7,400	800	12375	302	35	2700	344	50	3015	384	67	3335	425	84	3610	460	105			
8,325	900	12560	326	44	2885	368	62	3180	405	80	3470	442	98	3725	476	118			
9,250	1000	12800	357	55	3075	392	75	3350	427	95	3610	460	115	3865	493	137			
10,175	1100				3270	416	89	3530	450	112	3775	481	134	4015	512	159			
11,100	1200				3460	441	106	3720	474	131	3950	503	156	4175	532	182			
12,025	1300							3920	500	154	4130	527	179	4340	552	208			
12,950	1400							4120	525	180	4320	551	205	4520	576	237			
13,875	1500										4530	577	237	4710	600	269			
14,800	1600										4750	605	273	4900	625	304			
15,725	1700													5100	650	343			
16,650	1800													5310	677	385			
STATIC PRESSURE →																			
		3/4"		1"		1 1/4"		1 1/2"		1 3/4"		1 1/2"		2 1/2"		3 1/2"		5 1/2"	
7,400	800	3890	496	1.26	4150	529	1.49	4400	561	1.75	4860	619	2.30	5280	673	2.88			
8,325	900	3990	508	1.42	4220	538	1.65	4450	567	1.91	4910	625	2.46	5330	679	3.09			
9,250	1000	4110	523	1.61	4330	552	1.86	4530	577	2.09	4980	634	2.65	5400	698	3.31			
10,175	1100	4240	540	1.83	4450	567	2.08	4650	592	2.32	5075	646	2.89	5470	707	3.54			
11,100	1200	4380	558	2.07	4580	583	2.32	4780	609	2.59	5170	659	3.17	5550	707	3.81			
12,025	1300	4520	576	2.34	4720	601	2.59	4920	627	2.89	5290	674	3.48	5650	720	4.11			
12,950	1400	4680	596	2.63	4880	622	2.92	5070	646	3.24	5425	691	3.84	5770	735	4.47			
13,875	1500	4855	618	2.97	5050	643	3.28	5230	666	3.62	5580	711	4.25	5990	750	4.87			
14,800	1600	5050	643	3.33	5230	666	3.66	5400	688	4.03	5740	731	4.65	6030	766	5.32			
15,725	1700	5250	669	3.70	5410	689	4.09	5580	711	4.46	5910	753	5.16	6160	789	5.84			
16,650	1800	5455	694	4.15	5600	713	4.56	5770	735	4.95	6075	776	5.68	6360	810	6.42			
17,575	1900	5655	720	4.62	5810	740	5.06	5960	759	5.47	6275	799	6.24	6530	832	7.03			
18,500	2000	5860	746	5.19	6040	769	5.60	6150	783	6.01	6430	819	6.84	6760	854	7.65			
STATIC PRESSURE →																			
		1 3/4"		2"		2 1/4"		2 1/2"		3"		3 1/2"		4"		5"		6"	
9,250	1000	15790	738	3.96	16150	743	4.62	16490	827	5.34	16820	869	6.02	17470	952	7.70			
10,175	1100	15850	745	4.15	16200	750	4.87	16540	831	5.65	16865	875	6.33	17480	953	8.00			
11,100	1200	15920	754	4.43	16260	797	5.17	16600	841	5.95	16920	882	6.70	17520	958	8.35			
12,025	1300	16005	765	4.77	16345	808	5.49	16660	851	6.25	16975	889	7.10	17570	964	8.74			
12,950	1400	16110	778	5.16	16440	820	5.88	16780	864	6.60	17040	897	7.51	17630	971	9.16			
13,875	1500	16230	794	5.59	16550	834	6.30	16880	876	7.08	17120	907	7.93	17700	981	9.60			
14,800	1600	16360	810	6.06	16670	850	6.79	16980	889	7.60	17220	920	8.38	17780	991	10.1			
15,725	1700	16500	828	6.59	16800	866	7.31	17090	903	8.15	17320	932	8.88	17870	1003	10.7			
16,650	1800	16650	847	7.17	16940	884	7.90	17210	918	8.72	17450	949	9.48	17950	1017	11.4			
17,575	1900	16800	861	7.80	17080	902	8.57	17340	935	9.37	17590	967	10.2	18010	1032	12.1			
18,500	2000	16960	887	8.50	17220	920	9.30	17480	953	10.2	17730	985	11.0	18220	1047	12.9			
20,350	2200	17300	930	9.95	17550	962	10.5	17800	954	11.8	18030	1023	12.7	18480	1060	14.6			
22,200	2400	17650	975	11.3	17690	1005	12.5	18120	1034	13.5	18340	1062	14.5	18760	1101	15.5			

TABLE 58

No. 40 DOUBLE WIDTH DOUBLE INLET FAN — TYPE BI

Max. HP = 54 $\left(\frac{\text{RPM}^3}{1000}\right)$

CIRCUM. = 10.55' WHEEL DIA. 40 1/4" OUTLET AREA = 16.83 SQ. FT.

STATIC PRESSURE ➡	1/8"	1/4"	3/8"	1/2"	5/8"											
CFM	OUTLET VEL.	TIP SPEED	HP	TIP SPEED	HP											
10,098	600	1975	187	36	2390	226	59	2770	262	85	3130	297	115	3460	328	1152
11,781	700	2160	205	48	2535	240	74	2885	273	101	3220	305	1132	3520	333	1169
13,464	800	2375	225	62	2700	256	90	3015	286	121	3335	316	1152	3610	342	1189
15,147	900	2560	243	79	2885	273	112	3180	301	144	3470	329	1177	3725	353	1214
16,830	1000	2800	265	99	3075	291	135	3350	317	171	3610	342	1208	3865	366	1248
18,513	1100				3270	310	160	3530	334	202	3775	358	1242	4015	381	1288
20,196	1200				3460	328	191	3720	352	236	3950	374	1281	4175	396	1330
21,879	1300				3620	341	221	3900	371	279	4130	392	1322	4340	412	1375
23,562	1400				3800	354	254	4120	391	324	4320	410	1372	4520	428	1427
25,245	1500				4000	368	288	4300	429	426	4500	446	1484	4710	446	1484
26,928	1600				4200	383	322	4480	449	524	4680	464	1549	4890	464	1549
28,611	1700				4400	398	356	4660	469	624	4860	483	1619	5100	483	1619
30,294	1800				4600	413	390	4840	483	724	5040	503	1695	5310	503	1695
STATIC PRESSURE ➡	3/4"	1"	1 1/4"	1 1/2"	1 3/4"											
13,464	800	3890	369	2.70	4150	393	2.70	4400	417	3.15	4860	460	4.14	5280	500	5.21
15,147	900	3990	378	2.56	4220	400	2.99	4450	422	3.44	4910	466	4.45	5330	505	5.58
16,830	1000	4110	390	2.90	4330	410	3.36	4530	429	3.78	4980	472	4.79	5400	512	5.96
18,513	1100	4240	402	3.25	4450	422	3.75	4650	440	4.21	5075	481	5.20	5470	518	6.39
20,196	1200	4380	415	3.75	4580	434	4.16	4780	453	4.67	5170	490	5.71	5550	526	6.88
21,879	1300	4520	428	4.22	4720	447	4.67	4920	467	5.20	5290	501	6.28	5650	535	7.40
23,562	1400	4680	443	4.72	4880	462	5.26	5070	477	5.86	5425	514	6.92	5770	547	8.05
25,245	1500	4855	460	5.35	5050	478	5.91	5230	496	6.53	5580	529	7.65	5890	558	8.78
26,928	1600	5050	479	6.00	5230	496	6.59	5400	512	7.28	5740	544	8.44	6030	571	9.60
28,611	1700	5250	498	6.68	5410	513	7.39	5580	529	8.05	5910	560	9.30	6190	587	10.5
30,294	1800	5450	517	7.50	5600	530	8.21	5770	547	8.94	6090	577	10.2	6360	603	11.5
31,977	1900	5655	536	8.31	5810	551	9.12	5960	565	9.87	6275	594	11.2	6530	619	12.6
33,660	2000	5860	555	9.35	6040	573	10.1	6150	583	10.8	6430	610	12.3	6700	635	13.7
STATIC PRESSURE ➡	1 3/4"	2"	2 1/4"	2 1/2"	3"											
16,830	1000	5790	549	7.15	6150	583	8.30	6490	615	9.63	6820	646	11.0	7470	708	13.8
18,513	1100	5950	554	7.49	6200	588	8.79	6540	620	10.2	6865	650	11.4	7480	709	14.4
20,196	1200	6090	561	8.00	6260	593	9.31	6600	625	10.7	6920	656	12.1	7520	712	15.5
21,879	1300	6205	569	8.61	6345	602	9.88	6680	633	11.3	6975	661	12.7	7570	717	16.5
23,562	1400	6310	579	9.31	6440	610	10.6	6780	642	12.0	7040	667	13.5	7630	723	16.5
25,245	1500	6420	591	10.1	6550	621	11.3	6880	652	12.7	7120	675	14.2	7700	730	17.3
26,928	1600	6530	603	10.9	6670	632	12.2	6980	662	13.6	7220	684	15.0	7780	737	18.2
28,611	1700	6650	616	11.9	6800	644	13.1	7090	672	14.6	7320	694	16.0	7870	745	19.4
30,294	1800	6760	630	12.9	6940	658	14.3	7210	683	15.7	7450	706	17.0	7980	756	20.5
31,977	1900	6880	644	14.0	7080	671	15.5	7340	696	16.9	7590	719	17.8	8100	768	21.7
33,660	2000	6960	660	15.3	7220	684	16.8	7480	709	18.2	7730	733	19.7	8220	779	23.2
37,026	2200	7300	692	18.0	7550	715	19.5	7800	739	21.2	8030	761	23.0	8480	803	26.2
40,392	2400	7650	725	20.6	7890	747	22.5	8180	770	24.3	8340	790	26.1	8760	830	29.8

All published ratings based on air at 70° F. and 29.92" barometric pressure, and on tests in accordance with N.A.F.M. test code.

BI — DWDI

TABLE 59

No. 44 DOUBLE WIDTH DOUBLE INLET FAN — TYPE BI

Max. HP = 89 $\left(\frac{\text{RPM}^3}{1000}\right)$

CIRCUM. = 11.65' WHEEL DIA. 44 1/2" OUTLET AREA = 20.54 SQ. FT.

STATIC PRESSURE ➡		1/8"	1/4"	3/8"	1/2"	5/8"											
CFM	OUTLET VEL.	TIP SPEED RPM	TIP SPEED RPM	TIP SPEED RPM	TIP SPEED RPM	TIP SPEED RPM											
12,324	600	1975	170	44	2270	238	1.04	3130	268	1.41	3460	297	1.87				
14,378	700	2160	185	58	2535	217	90	2885	248	1.24	3220	276	1.62	3520	302	2.06	
16,432	800	2375	203	77	2700	232	110	3015	259	1.48	3335	286	1.87	3610	310	2.31	
18,486	900	2560	220	96	2885	247	138	3180	273	1.76	3470	298	2.17	3725	320	2.62	
20,540	1000	2800	240	121	3075	264	165	3350	287	2.10	3610	310	2.55	3865	331	3.03	
22,594	1100				3270	281	196	3530	303	2.48	3775	324	2.97	4015	344	3.52	
24,648	1200				3460	297	234	3720	319	2.89	3950	339	3.44	4175	358	4.04	
26,702	1300							3920	336	3.42	4130	355	3.93	4340	373	4.59	
28,756	1400							4120	354	3.96	4320	371	4.56	4520	388	5.23	
30,810	1500								4530	388	5.22	4710	403	5.91			
32,864	1600																
34,918	1700																
36,972	1800																
STATIC PRESSURE ➡		3/4"	1"	1 1/4"	1 1/2"	1 3/4"											
16,432	800	3890	334	2.79	4150	356	3.30	4400	377	3.86	4860	417	5.07	5280	451	6.39	
18,486	900	3990	342	3.14	4220	362	3.66	4450	382	4.21	4910	421	5.45	5330	457	6.83	
20,540	1000	4110	353	3.55	4330	372	4.12	4530	389	4.62	4980	427	5.86	5400	463	7.30	
22,594	1100	4240	364	4.04	4450	382	4.59	4650	399	5.16	5075	435	6.37	5470	478	8.42	
24,648	1200	4380	376	4.59	4580	393	5.10	4780	410	5.72	5170	443	7.00	5550	476	9.07	
26,702	1300	4520	388	5.17	4720	404	5.72	4920	422	6.37	5290	454	7.70	5650	485	9.07	
28,756	1400	4680	402	5.79	4880	419	6.45	5070	435	7.19	5425	465	8.49	5770	495	9.85	
30,810	1500	4855	417	6.55	5050	433	7.25	5230	448	8.00	5580	479	9.36	5890	505	10.8	
32,864	1600	5050	433	7.39	5230	448	8.06	5400	463	8.90	5740	492	10.3	6030	517	11.8	
34,918	1700	5250	450	8.18	5410	464	9.02	5580	479	9.85	5910	507	11.4	6190	530	12.9	
36,972	1800	5450	468	9.19	5600	480	10.2	5770	495	10.9	6090	522	12.6	6360	545	14.2	
39,026	1900	5655	485	10.2	5810	498	11.2	5960	502	12.0	6275	538	13.8	6530	560	15.4	
41,080	2000	5860	503	11.5	6040	518	12.3	6150	527	13.3	6430	552	15.1	6700	575	16.8	
STATIC PRESSURE ➡		1 3/4"	2"	2 1/4"	2 1/2"	3"											
20,540	1000	5790	497	8.76	6150	527	10.2	6490	557	11.8	6820	585	13.2	7470	640	17.0	
22,594	1100	5950	502	9.20	6200	532	10.7	6540	561	12.4	6865	589	13.9	7480	641	17.6	
24,648	1200	6090	508	9.80	6260	537	11.4	6600	566	13.1	6920	593	14.7	7520	645	18.4	
26,702	1300	6205	515	10.2	6345	544	12.1	6680	573	13.8	6975	599	15.6	7570	650	19.3	
28,756	1400	6310	524	11.4	6440	553	12.9	6780	581	14.5	7040	604	16.5	7630	655	20.4	
30,810	1500	6420	534	12.3	6550	562	13.9	6880	590	15.6	7120	611	17.4	7700	660	21.1	
32,864	1600	6530	545	13.4	6670	572	15.0	6980	599	16.7	7220	620	18.4	7780	667	22.1	
34,918	1700	6650	558	14.5	6800	583	16.2	7090	608	17.9	7320	628	19.6	7800	675	23.7	
36,972	1800	6760	570	15.8	6940	595	17.5	7210	619	19.3	7450	639	20.9	7980	684	25.1	
39,026	1900	6880	583	17.2	7080	607	19.0	7340	630	20.8	7590	652	22.4	8100	695	26.6	
41,080	2000	6960	597	18.7	7202	620	20.5	7480	641	22.4	7730	662	24.2	8220	706	28.6	
45,198	2200	7330	626	22.1	7550	648	23.9	7780	669	26.0	8030	688	28.2	8480	727	32.1	
49,286	2400	7650	657	25.3	7850	677	27.9	8120	697	29.7	8340	715	32.0	8740	752	35.2	

BI - DWDI

TABLE 60

No. 49 DOUBLE WIDTH DOUBLE INLET FAN — TYPE BI

$$\text{Max. HP} = 145 \left(\frac{\text{RPM}}{1000} \right)^3$$

CIRCUM. = 12.83 WHEEL DIA. 49" OUTLET AREA = 25.0 SQ. FT.

STATIC PRESSURE →	1 3/8"	1 1/2"	1"	3/8"	1/2"	5/8"														
CFM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM														
15,000	600 [1975]	1541	54 [2390]	186	87 [2770]	216 [261]	3130	244	11	70	3460	2742	26							
17,500	700 [2160]	1681	70 [2535]	197	111	109 [2885]	225	111	50	3220	251	11	96	3520	2742	50				
20,000	800 [2375]	1851	92 [2700]	210	111	33 [3015]	235	111	80	3335	260	12	26	3610	282	80				
22,500	900 [2560]	2001	117 [2885]	225	111	66 [3180]	248	12	12	3470	271	2	63	3725	290	3	16			
25,000	1000 [2800]	2181	146 [3075]	240	12	00 [3350]	261	2	53	3610	282	3	09	3865	301	3	66			
27,500	1100 [3040]	2361	170 [3270]	265	2	36 [3530]	275	3	00	3775	294	3	59	4015	313	4	25			
30,000	1200 [3280]	2541	194 [3461]	270	2	83 [3720]	290	3	50	3950	308	4	16	4175	326	4	89			
32,500	1300 [3520]	2721	218 [3650]	292	3	62 [3920]	316	4	12	4130	322	4	75	4340	339	5	50			
35,000	1400 [3760]	2901	242 [3840]	316	4	12 [4120]	342	4	79	4320	337	5	51	4520	352	6	32			
37,500	1500 [4000]	3081	266 [4030]	340	5	14 [4320]	362	6	32	4500	352	6	32	4710	367	7	16			
40,000	1600 [4240]	3261	290 [4220]	364	6	14 [4500]	377	7	30	4750	370	7	30	4900	382	8	12			
42,500	1700 [4480]	3441	314 [4410]	388	8	16 [4680]	392	8	16	4900	388	8	16	5100	398	9	16			
45,000	1800 [4720]	3621	338 [4600]	412	9	18 [4860]	417	9	18	5100	412	9	18	5310	414	10	3			
STATIC PRESSURE →	1 3/8"	1 1/2"	1"	3/8"	1/2"	5/8"														
20,000	800 [3890]	3031	336 [4150]	324	4	00 [4430]	343	4	66	4460	379	6	13	45280	412	7	72			
22,500	900 [4090]	3511	380 [4420]	330	4	92 [4450]	347	5	09	4490	383	6	06	45330	416	8	25			
25,000	1000 [4290]	3991	424 [4690]	338	4	99 [4450]	353	5	59	4480	388	7	10	45400	421	8	84			
27,500	1100 [4490]	4471	468 [4960]	347	5	55 [4450]	363	6	24	45075	396	7	70	45470	426	9	45			
30,000	1200 [4690]	4951	512 [5230]	357	6	17 [4780]	373	6	92	45170	403	8	46	45550	430	11	0			
32,500	1300 [4890]	5431	556 [5500]	368	6	92 [4920]	384	7	70	45290	412	9	30	45650	440	11	0			
35,000	1400 [5090]	5911	600 [5770]	380	7	00 [4880]	390	8	69	45070	395	8	69	45425	423	10	3			
37,500	1500 [5290]	6391	644 [6040]	394	8	76 [5230]	408	9	66	45580	435	11	3	45890	459	11	9			
40,000	1600 [5490]	6871	688 [6310]	408	9	75 [5400]	421	11	0	47110	447	12	5	46300	470	14	2			
42,500	1700 [5690]	7351	732 [6580]	422	11	0	435	11	9	45910	461	13	8	46190	483	15	6			
45,000	1800 [5890]	7831	779 [6850]	436	12	2	450	13	2	46090	475	15	2	46360	496	17	1			
47,500	1900 [6090]	8311	826 [7120]	450	13	5	489	16	7	46275	489	16	7	46530	509	18	7			
50,000	2000 [6290]	8791	873 [7390]	464	14	9	515	16	0	47916	501	18	2	46700	522	20	4			
STATIC PRESSURE →	1 3/8"	1 1/2"	1"	3/8"	1/2"	5/8"														
25,000	1000 [5790]	452	10	6	1550	479	12	3	6490	506	14	3	6820	532	16	0	7470	582	20	6
27,500	1100 [5990]	496	11	1	6200	483	13	0	6540	510	15	1	6865	535	16	9	7480	583	21	3
30,000	1200 [6190]	540	12	2	6200	488	13	8	6600	515	15	9	6920	539	17	9	7520	586	22	2
32,500	1300 [6390]	584	13	3	6345	494	14	6	6680	521	16	7	6975	544	18	9	7570	590	23	3
35,000	1400 [6590]	628	14	4	6440	502	15	6	6780	528	17	6	7040	549	20	0	7630	594	24	4
37,500	1500 [6790]	672	15	5	6550	511	16	8	6880	536	18	9	7120	555	21	1	7700	600	25	6
40,000	1600 [6990]	716	16	6	6670	520	18	1	6980	544	20	2	7220	563	22	2	7780	607	27	0
42,500	1700 [7190]	760	17	7	6800	530	19	5	7090	553	21	6	7320	571	23	7	7870	613	28	7
45,000	1800 [7390]	804	18	8	6940	541	21	1	7210	562	23	3	7450	580	25	2	7980	622	30	4
47,500	1900 [7590]	848	19	9	7080	552	23	0	7340	572	25	0	7590	591	27	0	8100	632	32	2
50,000	2000 [7790]	892	20	0	7220	563	24	8	7480	583	27	0	7730	603	29	3	8220	641	34	2
55,000	2200 [8230]	980	22	2	7550	588	28	9	7800	608	31	5	8080	636	34	0	8480	661	38	9
60,000	2400 [8670]	1068	24	4	7890	615	33	3	8120	633	35	9	8340	650	38	7	8760	682	42	2

All published ratings based on air at 70° F. and 29.92" barometric pressure, and on tests in accordance with N.A.F.M. test code.

TABLE 61

No. 54 DOUBLE WIDTH DOUBLE INLET FAN — TYPE BI

$$\text{Max. HP} = 235 \left(\frac{\text{RPM}}{1000} \right)^3$$

CIRCUM. = 14.14 WHEEL DIA. 54" OUTLET AREA = 30.6 SQ. FT.

STATIC PRESSURE ➤	1 3/8"	1 1/2"	1"	3/8"	1/2"	5/8"				
CFM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM	Tip Speed RPM				
18,300	600 [1975]	1401	68 [2390]	169 11 08	2270	196 11 52	3130	221 2 08	3460	244 2 72
21,420	700 [2160]	1531	88 [2535]	179 11 32	2885	204 11 84	3220	228 2 40	3520	249 3 04
24,480	800 [2375]	168 11 12	2700	191 11 64	3015	214 12 16	3335	236 2 76	3610	256 3 40
27,540	900 [2560]	181 11 47	2885	203 12 04	3180	223 2 56	3470	245 3 20	3725	264 3 84
30,600	1000 [2800]	198 11 76	3075	217 12 44	3350	237 3 08	3610	255 3 76	3865	273 4 48
33,660	1100 [3040]	216 11 76	3270	231 2 88	3530	250 3 64	3775	267 4 40	4015	284 5 16
36,720	1200 [3280]	234 11 76	3465	244 3 44	3720	263 4 28	3950	279 5 04	4175	295 5 88
39,780	1300 [3520]	252 11 76	3650	268 4 12	3920	277 5 00	4130	292 5 76	4340	307 6 76
42,840	1400 [3760]	270 11 76	4030	292 5 14	4120	291 5 80	4320	316 6 60	4520	320 7 68
45,900	1500 [4000]	288 11 76	4220	316 6 14	4320	316 6 14	4500	320 7 68	4710	333 8 72
48,960	1600 [4240]	306 11 76	4410	340 7 14	4500	340 7 14	4750	336 8 88	4900	347 9 84
52,020	1700 [4480]	324 11 76	4600	364 8 14	4680	364 8 14	4900	364 8 14	5100	361 11 1
55,080	1800 [4720]	342 11 76	4790	388 9 14	4860	388 9 14	5070	388 9 14	5310	376 12 5
STATIC PRESSURE ➤	1 3/8"	1 1/2"	1"	3/8"	1/2"	5/8"				
24,480	800 [3890]	275 11 76	408 11 50	293 11 92	4400	311 11 52	4860	343 11 44	5280	373 11 9 32
27,540	900 [4090]	282 11 76	460 12 20	298 11 36	4450	315 11 16	4910	347 11 04	5330	377 10 0
30,600	1000 [4290]	310 11 76	504 12 40	306 11 02	4530	321 11 60	4980	352 11 04	5400	382 10 6
33,660	1100 [4490]	338 11 76	548 13 10	315 11 72	4650	329 11 56	5075	359 11 32	5470	387 11 4
36,720	1200 [4690]	366 11 76	592 13 40	324 11 48	4780	338 11 36	5170	366 11 03	5550	393 12 2
39,780	1300 [4890]	394 11 76	636 14 10	334 11 56	4920	346 11 36	5290	374 11 4	5650	400 13 3
42,840	1400 [5090]	422 11 76	680 14 40	345 11 48	5070	359 11 5	5425	383 12 4	5770	428 14 5
45,900	1500 [5290]	450 11 76	724 15 10	357 11 6	5230	370 11 7	5580	394 13 7	5890	447 15 8
48,960	1600 [5490]	478 11 76	768 15 40	370 11 8	5400	382 13 0	5740	406 15 2	6030	471 17 2
52,020	1700 [5690]	506 11 76	812 15 70	383 13 3	5580	395 14 5	5910	418 16 7	6190	438 18 9
55,080	1800 [5890]	534 11 76	856 16 00	396 14 5	5760	408 16 0	6090	431 18 4	6360	450 20 8
58,140	1900 [6090]	562 11 76	900 16 30	410 16 4	5940	421 17 7	6275	444 20 1	6530	462 22 8
61,200	2000 [6290]	590 11 76	944 16 60	424 18 1	6150	435 19 5	6430	455 22 0	6700	474 24 8
STATIC PRESSURE ➤	1 3/8"	1 1/2"	1"	3/8"	1/2"	5/8"				
30,600	1000 [5790]	409 12 8	6150	435 14 9	6490	459 17 3	6820	482 19 4	7470	528 24 9
33,660	1100 [5990]	447 13 5	6200	439 15 8	6540	463 18 3	6865	486 20 4	7480	529 25 6
36,720	1200 [6190]	485 14 4	6260	443 16 8	6600	467 19 3	6920	490 21 8	7520	532 26 8
39,780	1300 [6390]	523 15 5	6345	448 17 8	6660	472 20 3	6975	494 23 0	7570	536 28 2
42,840	1400 [6110]	432 16 8	6440	455 19 0	6780	479 21 3	7040	498 24 3	7630	540 29 7
45,900	1500 [6230]	440 18 1	6550	463 20 4	6880	487 22 9	7120	503 25 6	7700	545 31 2
48,960	1600 [6350]	450 19 6	6670	472 22 0	6980	494 24 6	7200	510 27 1	7780	550 32 8
52,020	1700 [6500]	460 21 8	6800	481 23 7	7090	502 26 4	7320	518 28 8	7870	556 34 8
55,080	1800 [6650]	470 23 3	6940	491 25 6	7210	510 28 2	7450	527 30 6	7980	564 37 2
58,140	1900 [6800]	481 25 4	7080	501 27 7	7340	519 30 3	7550	537 32 8	8100	573 39 2
61,200	2000 [6960]	492 27 6	7250	511 29 1	7480	529 32 9	7730	547 35 7	8220	582 41 6
67,320	2200 [7300]	516 32 2	7750	534 35 2	7880	552 38 2	8030	568 40 1	8480	600 47 2
73,440	2400 [7650]	541 37 6	7890	558 40 4	8120	575 43 6	8340	590 46 8	8650	620 53 6

TABLE 62

No. 60 DOUBLE WIDTH DOUBLE INLET FAN — TYPE BI

Max. HP = 400 $\left(\frac{\text{RPM}^3}{1000}\right)$

CIRCUM. = 15.71' WHEEL DIA. 60" OUTLET AREA = 36.95 SQ. FT.

STATIC PRESSURE ➤	1' 8"		1' 4"		3' 6"		1' 2"		1' 10"		1' 8"						
	Tip Speed rpm	HP	Tip Speed rpm	HP	Tip Speed rpm	HP	Tip Speed rpm	HP	Tip Speed rpm	HP	Tip Speed rpm	HP					
CFM	22,170	600	1975	126	80	2390	152	132	2770	176	188	3130	199	244	3460	220	326
	25,885	700	2160	138	108	2535	161	114	2885	184	224	3220	205	292	3520	224	376
	29,560	800	2375	151	140	2700	172	200	3015	192	268	3335	212	336	3610	230	420
	33,295	900	2560	163	176	2885	184	248	3180	203	330	3470	221	392	3725	238	472
	36,950	1000	2800	178	260	3075	196	300	3350	214	380	3610	230	460	3865	246	548
	40,645	1100				3270	208	356	3530	225	448	3775	240	536	4015	256	636
	44,340	1200				3460	220	424	3720	237	524	3950	251	624	4175	266	728
	48,035	1300				3620	250	616	3920	250	616	4130	263	712	4340	276	832
	51,730	1400				4120	263	720	4320	275	820	4520	288	920	4520	288	948
	55,425	1500							4530	288	948	4710	300	1010	4710	300	1010
	59,120	1600							4750	302	1090	4900	312	1122	4900	312	1122
	62,815	1700										5100	325	137	5100	325	137
	66,512	1800										5310	338	154	5310	338	154
STATIC PRESSURE ➤	3' 4"		7' 8"		1'		1' 4"		1' 10"		1' 8"						
	Tip Speed rpm	HP	Tip Speed rpm	HP	Tip Speed rpm	HP	Tip Speed rpm	HP	Tip Speed rpm	HP	Tip Speed rpm	HP					
CFM	70,510	800	3890	225	504	4150	264	596	4400	280	700	4860	309	920	5290	336	1115
	74,205	900	3990	234	580	4230	269	660	4450	284	764	4910	313	984	5330	340	124
	77,900	1000	4110	262	644	4330	276	744	4530	288	836	4980	317	1060	5400	344	132
	81,595	1100	4240	270	732	4450	284	828	4650	296	928	5075	323	1112	5470	349	142
	85,290	1200	4380	278	820	4580	292	920	4780	304	1014	5170	330	1212	5550	354	152
	88,985	1300	4520	286	936	4700	301	1010	4920	313	1116	5290	337	1312	5630	360	162
	92,680	1400	4680	298	1050	4880	311	1112	5070	323	1210	5425	345	1414	5700	367	176
	96,375	1500	4855	309	1160	5050	322	1213	5230	333	1314	5580	355	1512	5890	375	195
	100,070	1600	5050	321	1313	5230	333	1314	5400	344	1416	5740	366	1618	6030	384	213
	103,765	1700	5250	334	1418	5410	346	1416	5580	355	1518	5910	377	1720	6190	394	233
	107,460	1800	5450	347	1616	5600	357	1618	5770	367	1719	6090	388	1822	6380	405	257
	111,155	1900	5655	360	1815	5810	370	1819	5980	379	1819	6275	399	1925	6590	416	281
	114,850	2000	5860	373	2018	6040	384	2022	6180	391	2024	6480	410	2124	6790	437	306
STATIC PRESSURE ➤	1' 3' 4"		2' 7' 8"		2' 1'		2' 1' 4"		2' 1' 10"		2' 1' 8"						
	Tip Speed rpm	HP	Tip Speed rpm	HP	Tip Speed rpm	HP	Tip Speed rpm	HP	Tip Speed rpm	HP	Tip Speed rpm	HP					
CFM	118,545	1100	5780	330	1915	6190	341	1815	6490	413	2112	6820	434	244	7470	476	302
	122,240	1200	5950	339	2116	6320	350	1915	6590	417	2216	6990	437	253	7740	477	320
	125,935	1300	6120	347	2317	6460	350	2017	6690	421	2318	7020	441	268	7920	479	334
	129,630	1400	6300	357	2519	6640	360	2218	6860	426	2518	7075	445	280	8200	482	350
	133,325	1500	6480	366	2720	6840	370	2419	7040	432	2618	7240	448	300	8470	486	366
	137,020	1600	6660	377	2922	7040	380	2619	7240	438	2819	7420	454	317	8700	491	384
	140,715	1700	6840	386	3124	7240	390	2820	7440	444	3020	7600	460	333	8960	496	404
	144,410	1800	7020	396	3326	7440	400	3022	7640	450	3222	7800	466	355	9180	502	428
	148,105	1900	7200	405	3528	7640	410	3224	7840	456	3424	8000	472	377	9400	508	452
	151,800	2000	7380	415	3730	7840	420	3426	8040	462	3626	8200	478	399	9620	514	476
	155,495	2100	7560	424	3932	8040	430	3628	8240	468	3828	8400	484	421	9840	520	500
	159,190	2200	7740	434	4134	8240	440	3830	8440	474	4030	8600	490	443	10060	526	524
	162,885	2300	7920	443	4336	8440	450	4032	8640	480	4232	8800	496	465	10280	532	548
	166,580	2400	8100	453	4538	8640	460	4234	8840	486	4434	9000	502	487	10500	538	572
	170,275	2500	8280	462	4740	8840	470	4436	9040	492	4636	9200	508	509	10720	544	596
	173,970	2600	8460	471	4942	9040	480	4638	9240	498	4838	9400	514	531	10940	550	620
	177,665	2700	8640	480	5144	9240	490	4840	9440	504	5040	9600	520	553	11160	556	644
	181,360	2800	8820	489	5346	9440	500	5042	9640	510	5242	9800	526	575	11380	562	668
	185,055	2900	9000	498	5548	9640	510	5244	9840	516	5444	10000	532	597	11600	568	692
	188,750	3000	9180	507	5750	9840	520	5446	10040	522	5646	10200	538	619	11820	574	716
	192,445	3100	9360	516	5952	10040	530	5648	10240	528	5848	10400	544	641	12040	580	740
	196,140	3200	9540	525	6154	10240	540	5850	10440	534	6050	10600	550	663	12260	586	764
	200,000	3300	9720	534	6356	10440	550	6052	10640	540	6252	10800	556	685	12480	592	788
	203,795	3400	9900	543	6558	10640	560	6254	10840	546	6454	11000	562	707	12700	598	812
	207,590	3500	10080	552	6760	10840	570	6456	11040	552	6656	11200	568	729	12920	604	836
	211,385	3600	10260	561	6962	11040	580	6658	11240	558	6858	11400	574	751	13140	610	860
	215,180	3700	10440	570	7164	11240	590	6860	11440	564	7060	11600	580	773	13360	616	884
	218,975	3800	10620	579	7366	11440	600	7062	11640	570	7262	11800	586	795	13580	622	908
	222,770	3900	10800	588	7568	11640	610	7264	11840	576	7464	12000	592	817	13800	628	932
	226,565	4000	10980	597	7770	11840	620	7466	12040	582	7666	12200	598	839	14020	634	956
	230,360	4100	11160	606	7972	12040	630	7668	12240	588	7868	12400	604	861	14240	640	980
	234,155	4200	11340	615	8174	12240	640	7870	12440	594	8070	12600	610	883	14460	646	1004
	237,950	4300	11520	624	8376	12440	650	8072	12640	599	8272	12800	616	905	14680	652	1028
	241,745	4400	11700	633	8578	12640	660	8274	12840	605	8474	13000	622	927	14900	658	1052
	245,540	4500	11880	642	8780	12840	670	8476	13040	611	8676	13200	628	949	15120	664	1076
	249,335	4600	12060	651	8982	13040	680	8678	13240	617	8878	13400	634	971	15340	670	1100
	253,130	4700	12240	660	9184	13240	690	8880	13440	623	9080	13600	640	993	15560	676	1124
	256,925	4800	12420	669	9386	13440	700	9082	13640	629	9282	13800	646	1015	15780	682	1148
	260,720	4900	12600	678	9588	13640	710	9284	13840	635	9484	14000	652	1037	16000	688	1172
	264,515	5000	12780	687	9790	13840	720	9486	14040	641	9686	14200	658	1059	16220	694	1196
	268,310	5100	12960	696	9992	14040	730	9688	14240	647	9888	14400	664	1081	16440	700	1220
	272,105	5200	13140	705	10194	14240	740	9890	14440	653	10090	14600	670	1103	16660	706	1244
	275,900	5300	13320	714	10396	14440	750	10092	14640	659	10292	14800	676	1125	16880	712	1268
	279,695	5400	13500	723	10598	14640	760	10294	14840	665	10494	15000	682	1147	17100	718	1292
	283,490	5500	13680	732	10800	14840	770	10496	15040	671	10696	15200	688	1169	17320	724	1316
	287,285	5600	13860	741	11002	15040	780	10698	15240	677	10898	15400	694	1191	17540	730	1340
	291,080	5700	14040	750	11204	15240	790	10900	15440	683	11100	15600	700	1213	17760	736	1364
	294,875	5800	14220	759	11406	15440	800	11102	15640	689							

STANDARD MOTOR POSITIONS

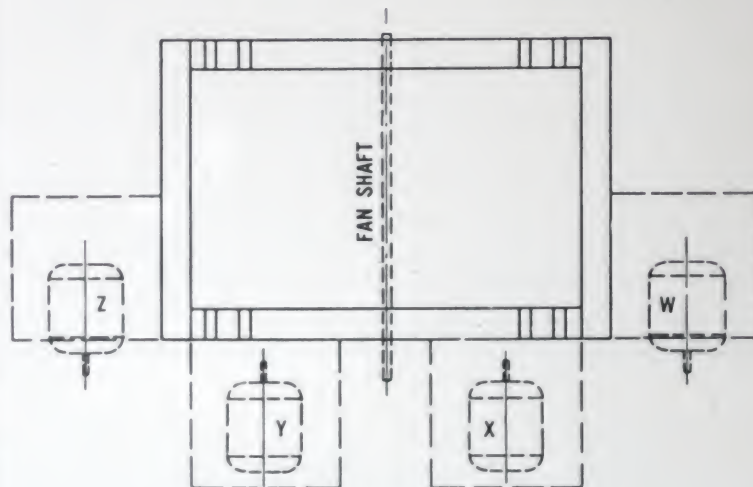


FIGURE 34

The location of motor is determined by facing the drive side of fan and designating the motor position by letters W, X, Y or Z as the case may be.

STANDARD DRIVE ARRANGEMENTS

The designations of drive arrangements shown here are recognized as standard by the NAFM.

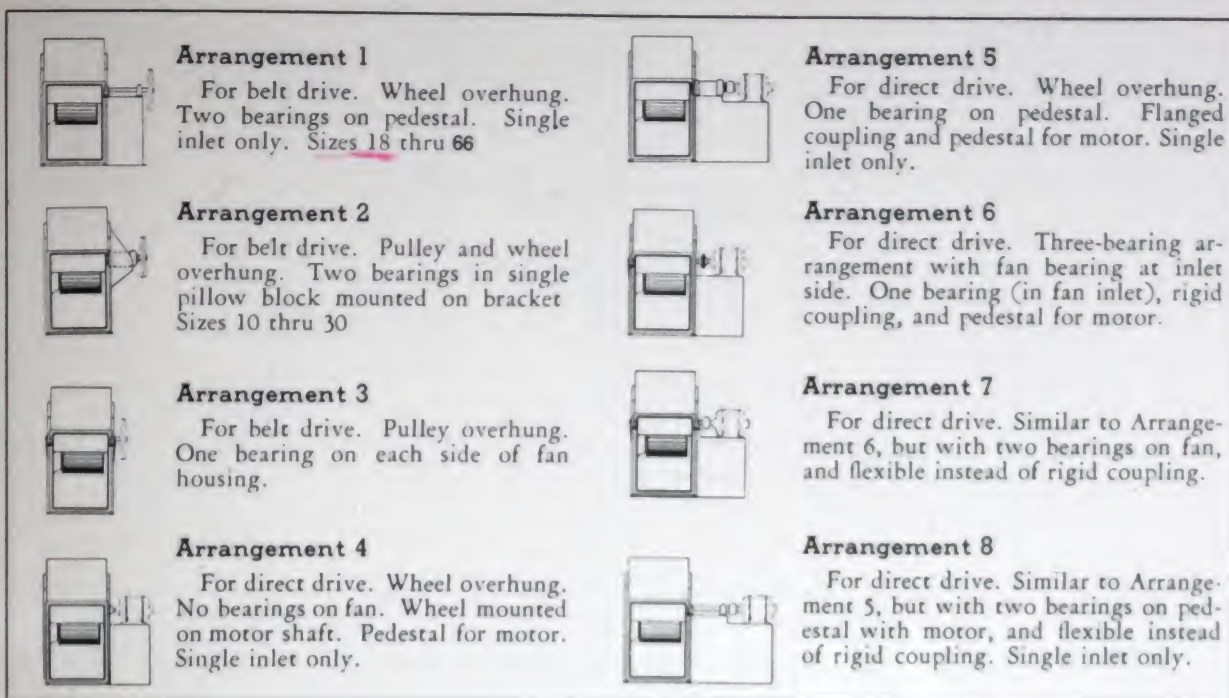


FIGURE 35

DIRECTION OF ROTATION AND DISCHARGE

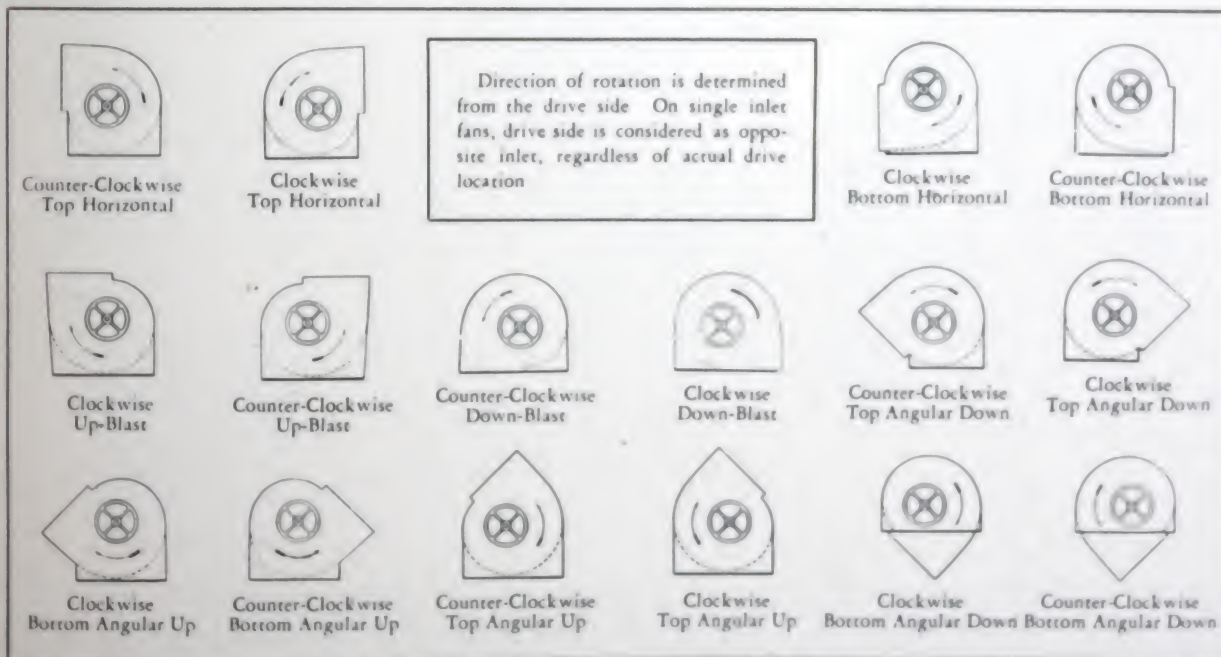


FIGURE 36

NOTE: Dimension diagrams on Pages 48 to 61 cover the four most commonly used discharges — namely, top horizontal, bottom horizontal, up-blast and down-blast. Drawings for other standard discharge and rotations indicated above will be furnished on request.

ROUGHING-IN DIMENSIONS — ARRANGEMENT 1 — SIZES 18-30 TOP HORIZONTAL DISCHARGE

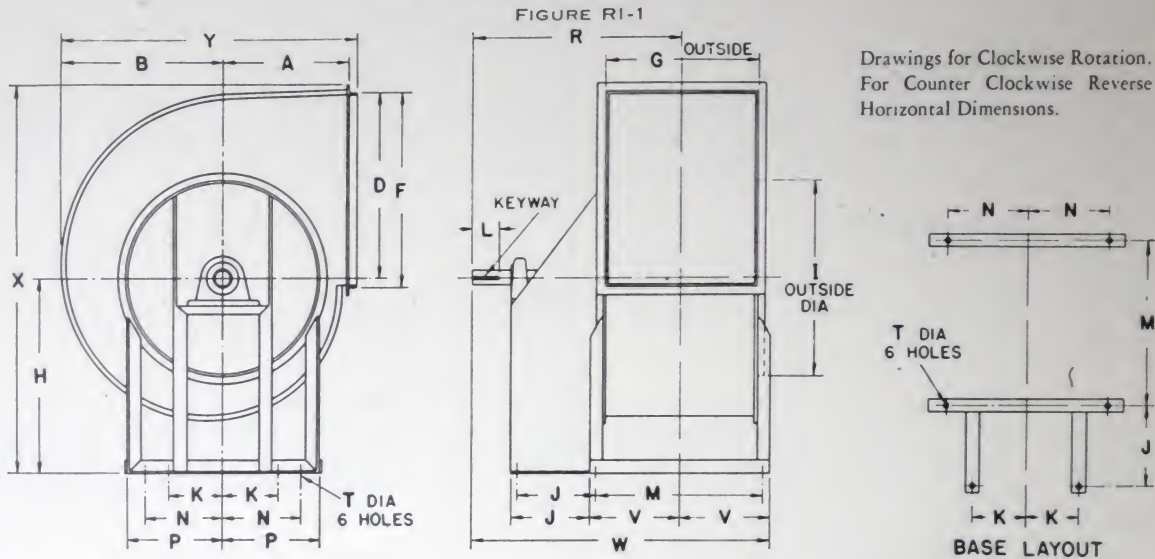


TABLE RI-1

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	B	D	F	G	H	I	K	L	M	N	P	T	V	X	Y	BALL BEARING			OIL RING SLEEVE BEARING		
																					J	R	W	J	R	W
FC & BI	18	18	1 1/2	3/8 X 3/8	12 3/4	15 1/2	17 1/2	18 3/4	14 3/4	19 1/2	6 3/4	2 1/2	16 3/4	7 1/2	9 1/4	8 3/4	37 1/2	29 3/4	9 1/2	21 3/4	30 3/4	12 1/2	26	34 3/4		
FC & BI	21	21	1 1/2	3/8 X 3/8	14 3/4	18 3/4	20 3/4	21 3/4	17	22 1/2	6 3/4	2 1/2	18 3/4	8 3/4	10 3/4	10 3/4	43 3/4	34 3/4	11	24 3/4	34 3/4	12 1/2	27 1/2	37 1/2		
FC & BI	24	24	1 1/2	3/8 X 3/8	16 3/4	20 3/4	23 3/4	24 3/4	19 3/4	26 1/2	7 3/4	3 1/2	21 3/4	10 3/4	12 3/4	11 3/4	50 3/4	38 3/4	12 1/2	29 3/4	40	13 3/4	31 1/4	43		
FC & BI	27	27	1 1/2	3/8 X 3/8	18 3/4	23 3/4	26 3/4	27 3/4	21 3/4	29 1/2	7 3/4	3 1/2	23 3/4	11 3/4	14 3/4	12 1/2	56 1/2	43	14 3/4	31 3/4	44 3/4	14 3/4	33 3/4	46 3/4		
FC & BI	30	30	1 1/2	3/8 X 3/8	20 3/4	26 3/4	29 3/4	30 3/4	24 3/4	32 1/2	8 3/4	4	26 3/4	12 3/4	15 3/4	14 3/4	62 1/2	47 3/4	16 3/4	35 3/4	49 3/4	16 3/4	37 3/4	51 3/4		

UP-BLAST DISCHARGE

FIGURE RI-2

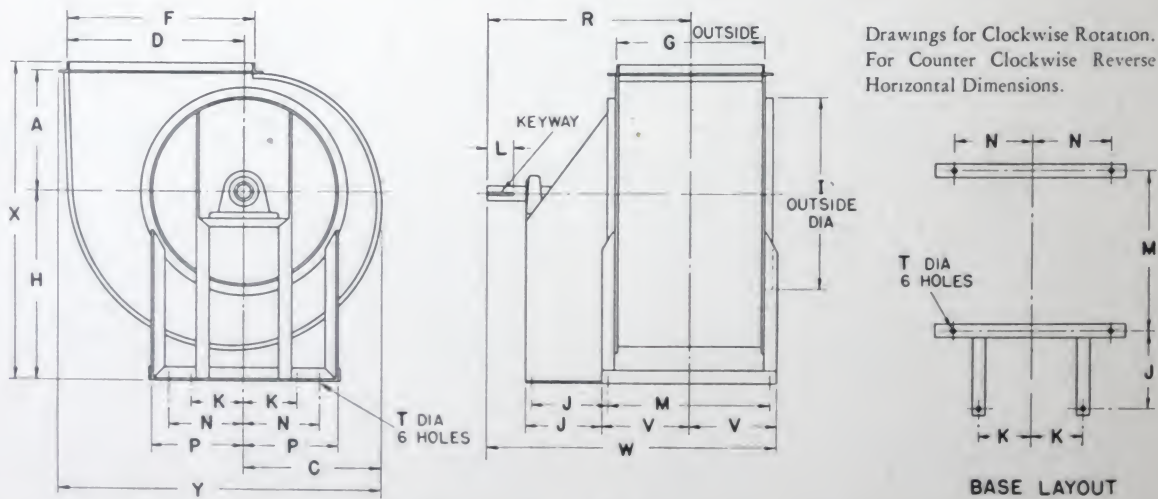


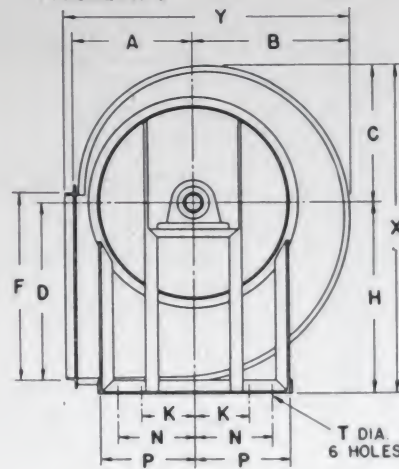
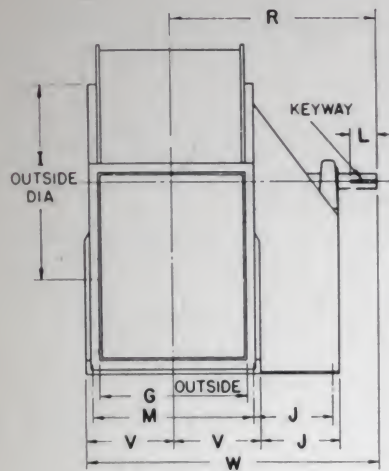
TABLE RI-2

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	C	D	F	G	H	I	K	L	M	N	P	T	V	X	Y	BALL BEARING			OIL RING SLEEVE BEARING		
																					J	R	W	J	R	W
FC & BI	18	18	1 1/2	3/8 X 3/8	12 3/4	13 3/4	17 1/2	18 3/4	14 3/4	19 1/2	6 3/4	2 1/2	16 3/4	7 1/2	9 1/4	8 3/4	32 3/4	32 3/4	9 1/2	21 3/4	30 3/4	12 1/2	26	34 3/4		
FC & BI	21	21	1 1/2	3/8 X 3/8	14 3/4	16 3/4	20 3/4	21 3/4	17	22 1/2	6 3/4	2 1/2	18 3/4	8 3/4	10 3/4	10 3/4	37 3/4	37 3/4	11	24 3/4	34 3/4	12 1/2	27 1/2	37 1/2		
FC & BI	24	24	1 1/2	3/8 X 3/8	16 3/4	18 3/4	23 3/4	24 3/4	19 3/4	26 1/2	7 3/4	3 1/2	21 3/4	10 3/4	12 3/4	11 3/4	43 3/4	43 3/4	12 1/2	28 3/4	40	13 3/4	31 1/4	43		
FC & BI	27	27	1 1/2	3/8 X 3/8	18 3/4	20 3/4	26 3/4	27 3/4	21 3/4	29 1/2	7 3/4	3 1/2	23 3/4	11 3/4	14 3/4	12 1/2	48 3/4	48 3/4	14 3/4	31 3/4	44 3/4	14 3/4	33 3/4	46 3/4		
FC & BI	30	30	1 1/2	3/8 X 3/8	20 3/4	22 3/4	29 3/4	30 3/4	24 3/4	32 1/2	8 3/4	4	26 3/4	12 3/4	15 3/4	14 3/4	53 3/4	53 3/4	16 3/4	35 3/4	49 3/4	16 3/4	37 3/4	51 3/4		

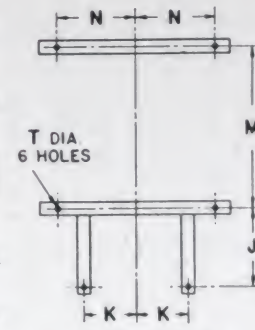
NOTE: All dimensions subject to change without notice. Where exact dimensions are required write for certified drawings.

ROUGHING-IN DIMENSIONS — ARRANGEMENT 1 — SIZES 18-30 BOTTOM HORIZONTAL DISCHARGE

FIGURE RI-3



Drawings for Clockwise Rotation.
For Counter Clockwise Reverse
Horizontal Dimensions.



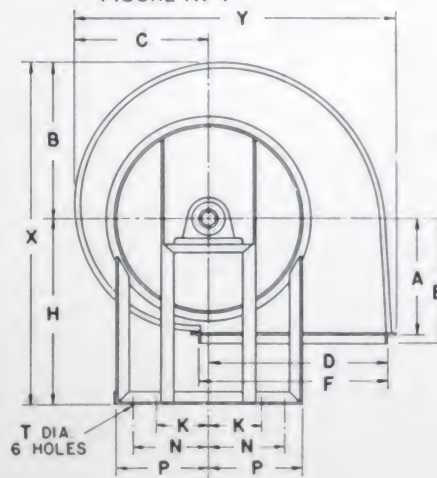
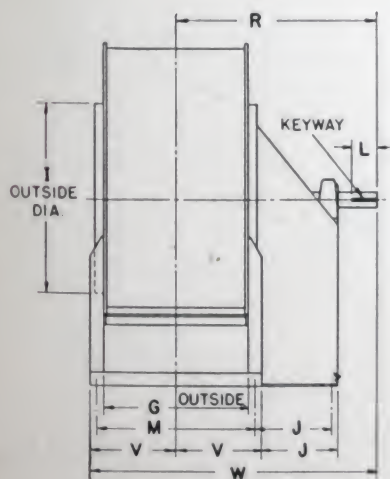
BASE LAYOUT

TABLE RI-3

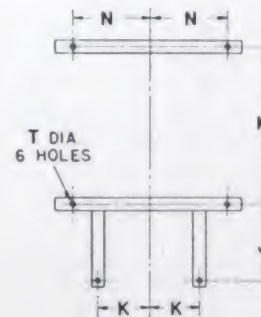
FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	B	C	D	F	G	H	I	K	L	M	N	P	T	V	X	Y	BALL BEARING			OIL RING SLEEVE BEARING		
																						J	R	W	J	R	W
FC & BI	18	18	1 1/2	3/8 X 3/8	12 3/4	15 1/2	13 3/4	17 1/2	18 1/2	14 1/2	19 1/2	19 1/2	6 1/2	2 1/2	16 1/2	7 1/2	9 1/2	8 1/2	32	29 1/2	9 1/2	21 1/2	30 1/2	12 1/2	26	34 1/2	
FC & BI	21	21	1 1/2	3/8 X 3/8	14 3/4	18 1/2	16 1/2	20 1/2	21 1/2	17	22 1/2	22 1/2	6 1/2	2 1/2	18 1/2	8 1/2	10 1/2	10	38 1/2	34 1/2	11 1/2	24 1/2	34 1/2	12 1/2	27 1/2	37 1/2	
FC & BI	24	24	1 1/2	3/8 X 3/8	16 3/4	20 1/2	18 1/2	23 1/2	24 1/2	19 1/2	26 1/2	25 1/2	7 1/2	3 1/2	21 1/2	10 1/2	12 1/2	11 1/2	44 1/2	38 1/2	12 1/2	28 1/2	40	13 1/2	31 1/2	43	
FC & BI	27	27	1 1/2	3/8 X 3/8	18 3/4	23 1/2	20 1/2	26 1/2	27 1/2	21 1/2	29 1/2	28 1/2	7 1/2	3 1/2	23 1/2	11 1/2	14 1/2	12 1/2	49 1/2	43 1/2	14 1/2	31 1/2	44 1/2	14 1/2	33 1/2	46 1/2	
FC & BI	30	30	1 1/2	3/8 X 3/8	20 3/4	26 1/2	22 1/2	29 1/2	30 1/2	24 1/2	32 1/2	31 1/2	8 1/2	4 1/2	26 1/2	12 1/2	15 1/2	14 1/2	54 1/2	47 1/2	16 1/2	35 1/2	49 1/2	16 1/2	37 1/2	51 1/2	

DOWN-BLAST DISCHARGE

FIGURE RI-4



Drawings for Clockwise Rotation.
For Counter Clockwise Reverse
Horizontal Dimensions.



BASE LAYOUT

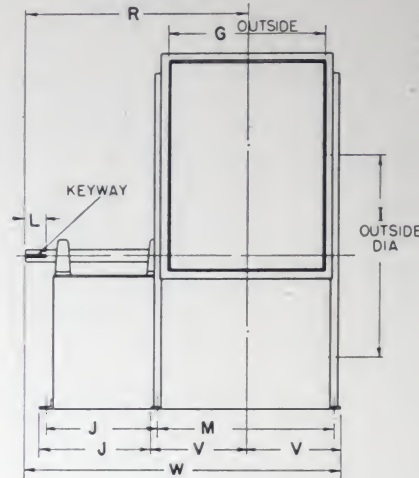
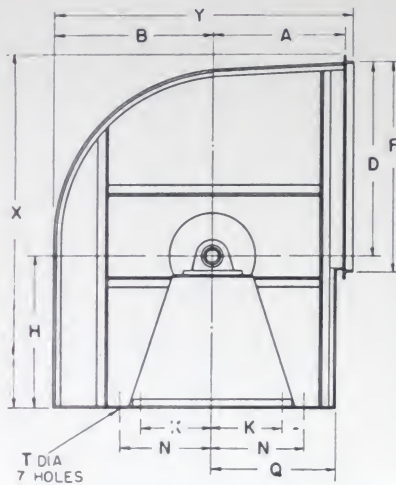
TABLE RI-4

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	B	C	D	E	F	G	H	I	K	L	M	N	P	T	V	X	Y	BALL BEARING			OIL RING SLEEVE BEARING		
																							J	R	W	J	R	W
FC & BI	18	18	1 1/2	3/8 X 3/8	12 3/4	15 1/2	13 3/4	17 1/2	18 1/2	14 1/2	19 1/2	19 1/2	6 1/2	2 1/2	16 1/2	7 1/2	9 1/2	8 1/2	34	32	9 1/2	21 1/2	30 1/2	12 1/2	26	34 1/2		
FC & BI	21	21	1 1/2	3/8 X 3/8	14 3/4	18 1/2	16 1/2	20 1/2	21 1/2	17	22 1/2	22 1/2	6 1/2	2 1/2	18 1/2	8 1/2	10 1/2	10	40	37 1/2	11 1/2	24 1/2	34 1/2	12 1/2	27 1/2	37 1/2		
FC & BI	24	24	1 1/2	3/8 X 3/8	16 3/4	20 1/2	18 1/2	23 1/2	24 1/2	19 1/2	26 1/2	25 1/2	7 1/2	3 1/2	21 1/2	10 1/2	12 1/2	11 1/2	46 1/2	43 1/2	12 1/2	28 1/2	40	13 1/2	31 1/2	43		
FC & BI	27	27	1 1/2	3/8 X 3/8	18 3/4	23 1/2	20 1/2	26 1/2	27 1/2	21 1/2	29 1/2	28 1/2	7 1/2	3 1/2	23 1/2	11 1/2	14 1/2	12 1/2	52 1/2	48 1/2	14 1/2	31 1/2	44 1/2	14 1/2	33 1/2	46 1/2		
FC & BI	30	30	1 1/2	3/8 X 3/8	20 3/4	26 1/2	22 1/2	29 1/2	30 1/2	24 1/2	32 1/2	31 1/2	8 1/2	4 1/2	26 1/2	12 1/2	15 1/2	14 1/2	58 1/2	53 1/2	16 1/2	35 1/2	49 1/2	16 1/2	37 1/2	51 1/2		

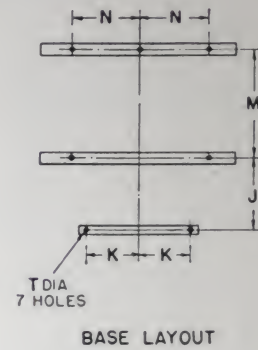
NOTE: All dimensions subject to change without notice. Where exact dimensions are required write for certified drawings.

ROUGHING-IN DIMENSIONS — ARRANGEMENT 1 — SIZES 33-89 TOP HORIZONTAL DISCHARGE

FIGURE RI-5



Drawings for Clockwise Rotation.
For Counter Clockwise Reverse
Horizontal Dimensions.



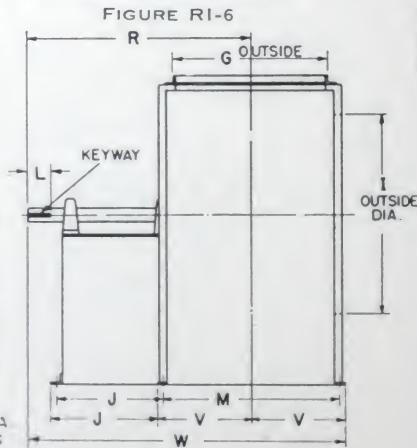
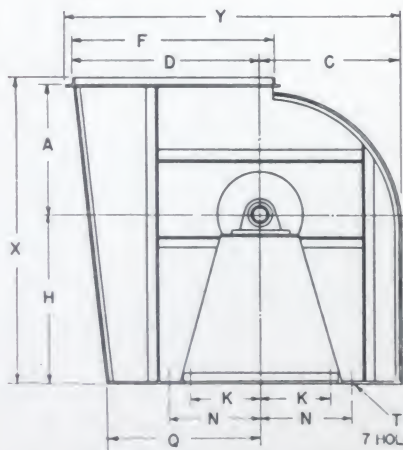
BASE LAYOUT

TABLE RI-5

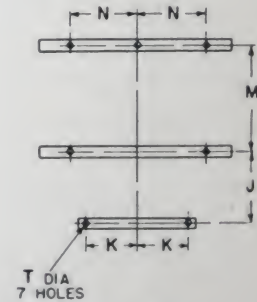
FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	B	D	F	G	H	I	J	K	L	M	N	Q	T	V	X	Y	BALL BEARING		Oil Ring Sleeve Bearing	
																						R	W	R	W
FC & BI	33	33	2 1/8	3/4 X 1/4	23	27 1/2	32 1/2	33 3/4	27	26 1/4	34	18 1/2	13	4	28 1/2	17	21	15 1/8	60 1/8	52	37 1/2	52 3/4	39 1/2	54 1/2	58 1/2
FC & BI	36	36	2 1/8	3/4 X 1/4	25	30 1/2	35 1/2	36 3/4	29	28 1/2	37	19	14	4	31 1/2	18	22 1/2	16 1/8	65	56 1/8	40 1/2	56 1/2	42 1/2	58 1/2	64 1/2
FC & BI	40	40 1/2	2 1/8	3/4 X 1/4	28	34 1/2	39 1/2	40 3/4	32 1/2	32 1/2	41 1/2	21	17	5	34 1/2	21	25 1/2	18 1/8	73 1/2	63 1/2	43 1/2	62 1/2	46 1/2	64 1/2	71 1/2
FC & BI	44	44 1/2	2 1/8	3/4 X 1/4	31	37 1/2	43 1/2	45	35 1/2	35 1/2	45 1/2	23	19	5	37 1/2	23	28 1/2	19 1/8	80 1/2	69 1/2	48 1/2	68 1/2	51 1/2	71 1/2	79 1/2
FC & BI	49	49	2 1/8	3/4 X 1/4	34 1/2	41 1/2	48 1/2	49 1/2	39 1/2	39	50	25 1/2	21	5	42 1/2	25	31 1/2	22 1/8	88 1/2	76 1/2	54 1/2	76 1/2	57 1/2	79 1/2	87 1/2
FC & BI	54	54	2 1/8	3/4 X 1/4	37	45 1/2	53 1/2	54 1/2	43 1/2	43	55	28	21	6	46 1/2	27	34 1/2	24 1/8	97 1/2	83 1/2	59 1/2	84 1/2	63	87 1/2	96 1/2
FC & BI	60	60	3 1/8	1 X 1/2	41 1/2	50 1/2	59 1/2	60 1/2	48	47 1/2	61	31 1/2	24	6	51 1/2	30	38 1/2	27 1/8	108 1/2	93 1/2	66	93	69 1/2	96 1/2	106 1/2
FC & BI	66	66	3 1/8	1 X 1/2	45 1/2	55 1/2	65 1/2	66 1/2	52 1/2	52	67	35 1/2	27	7	56 1/2	33	41 1/2	29 1/8	118 1/2	102 1/2	73 1/2	102 1/2	76 1/2	106 1/2	116 1/2

UP-BLAST DISCHARGE

FIGURE RI-6



Drawings for Clockwise Rotation.
For Counter Clockwise Reverse
Horizontal Dimensions.



BASE LAYOUT

TABLE RI-6

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	C	D	F	G	H	I	J	K	L	M	N	Q	T	V	X	Y	BALL BEARING		Oil Ring Sleeve Bearing	
																						R	W	R	W
FC & BI	33	33	2 1/8	3/4 X 1/4	23	24 1/2	32 1/2	33 3/4	27	30	34	18 1/2	13	4	28 1/2	17	29 1/2	15 1/8	54 1/2	58 1/2	37 1/2	52 3/4	39 1/2	54 1/2	58 1/2
FC & BI	36	36	2 1/8	3/4 X 1/4	25	26 1/2	35 1/2	36 3/4	29	32	37	19	14	4	31 1/2	18	32 1/2	16 1/8	58 1/2	63 1/2	40 1/2	56 1/2	42 1/2	58 1/2	64 1/2
FC & BI	40	40 1/2	2 1/8	3/4 X 1/4	28	29 1/2	39 1/2	40 3/4	32 1/2	36 1/2	41 1/2	21	17	5	34 1/2	21	36 1/2	18 1/8	65 1/2	70 1/2	43 1/2	62 1/2	46 1/2	64 1/2	71 1/2
FC & BI	44	44 1/2	2 1/8	3/4 X 1/4	31	33	43 1/2	45	35 1/2	40	45 1/2	23	19	5	37 1/2	23	40 1/2	19 1/8	72 1/2	78	48 1/2	68 1/2	51 1/2	71 1/2	79 1/2
FC & BI	49	49	2 1/8	3/4 X 1/4	34 1/2	36 1/2	48 1/2	49 1/2	39 1/2	44	50	25 1/2	21	5	42 1/2	25	44 1/2	22 1/8	79 1/2	85 1/2	54 1/2	76 1/2	57 1/2	79 1/2	87 1/2
FC & BI	54	54	2 1/8	3/4 X 1/4	37	40 1/2	53 1/2	54 1/2	43 1/2	48 1/2	55	28	21	6	46 1/2	27	48 1/2	24 1/8	86 1/2	94 1/2	59 1/2	84 1/2	63	87 1/2	96 1/2
FC & BI	60	60	3 1/8	1 X 1/2	41 1/2	44 1/2	59 1/2	60 1/2	48	54	61	31 1/2	24	6	51 1/2	30	54 1/2	27 1/8	96 1/2	105 1/2	66	93	69 1/2	96 1/2	106 1/2
FC & BI	66	66	3 1/8	1 X 1/2	45 1/2	48 1/2	65 1/2	66 1/2	52 1/2	59	67	35 1/2	27	7	56 1/2	33	59 1/2	29 1/8	105 1/2	115 1/2	73 1/2	102 1/2	76 1/2	106 1/2	116 1/2

* Diameter for sheave bore.

Note: All dimensions subject to change without notice. Where exact dimensions are required write for certified drawings.

ROUGHING-IN DIMENSIONS — ARRANGEMENT 1 — SIZES 33-89 BOTTOM HORIZONTAL DISCHARGE

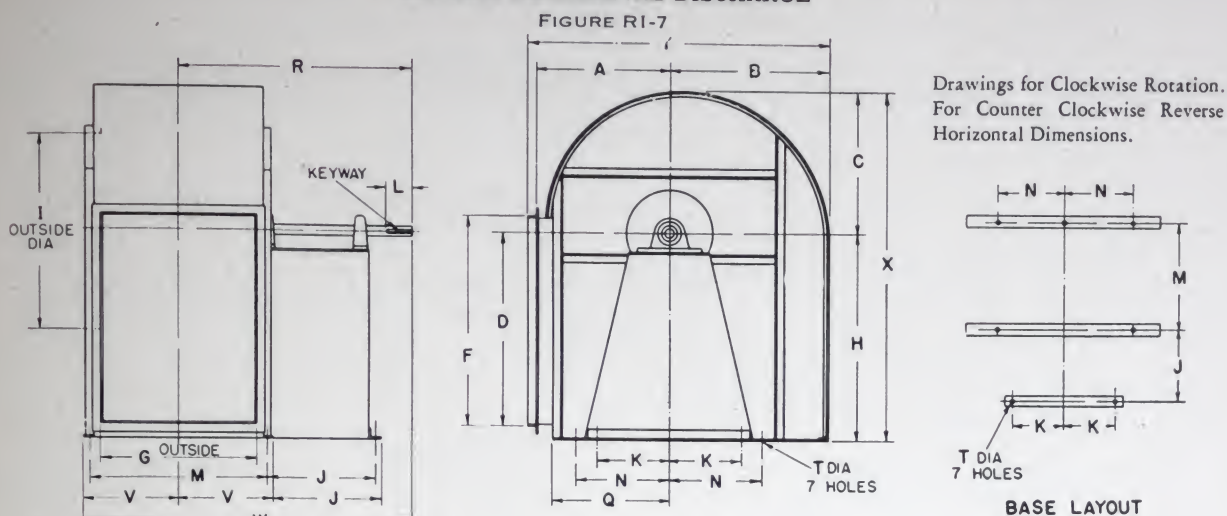


TABLE RI-7

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	B	C	D	F	G	H	I	J	K	L	M	N	Q	T	V	X	Y	BALL BEARING		Oil Ring Sleeve Bearing	
																							R	W	R	W
FC&BI	33	33	2 1/8	1/2 X 1/4	23	27 3/4	24 1/8	32 1/8	33 3/4	27	34 1/4	34	18 1/2	13	4	28 1/2	17	19 3/4	15 1/8	59 1/8	52	37 1/8	52 1/4	39 1/8	54 1/4	
FC&BI	36	36	2 1/8	1/2 X 1/4	25	30 1/8	26 1/8	35 3/8	36 3/8	29	37 3/4	37	19	14	4	31 1/8	18	21 3/4	16 1/8	64 1/8	56 3/8	40 1/8	56 3/4	42 1/8	58 3/8	
FC&BI	40	40 1/2	2 1/8	3/8 X 1/8	28	34 1/8	29 1/8	39 3/8	40 3/4	32 1/4	42 1/4	41 1/4	21	17	5	34 3/8	21	24 1/4	18 1/8	72 1/8	63 1/8	43 1/8	62 1/4	46 1/8	64 1/4	
FC&BI	44	44 1/2	2 1/8	3/8 X 1/8	31	37 1/8	33 1/8	43 3/8	45	35 3/4	46 3/4	45 3/4	23	19	5	37 3/8	23	26 3/4	19 3/8	79 1/8	69 1/8	48 1/8	68 3/4	51 1/8	71	
FC&BI	49	49	2 1/8	3/4 X 3/8	34 1/8	41 1/8	36 1/8	48 3/8	49 3/4	39 1/4	51	50	25 1/2	21	5	42 1/8	25	28 3/4	22 1/8	87 1/8	76 1/8	54 1/8	76 3/4	57 1/8	79 3/4	
FC&BI	54	54	2 1/8	3/4 X 3/8	37	45 3/8	40 3/8	53 3/8	54 3/4	43 1/4	56 3/4	55	28	21	6	46 3/8	27	31 1/8	24 3/8	96 3/8	83 3/8	59 3/8	84 3/4	63	87 3/8	
FC&BI	60	60	3 1/8	3/4 X 3/8	41 1/8	50 3/8	44 3/8	59 3/8	60 3/4	48	62 3/4	61	31 3/8	24	6	51 3/8	30	34 3/8	27 1/8	106 3/8	93 3/8	66	93	69 3/4	96 3/4	
FC&BI	66	66	3 1/8	1 X 1/2	45 3/8	55 3/8	48 3/8	65 3/8	66 3/4	52 3/4	68 3/4	67	35 3/8	27	7	56 3/8	33	37 3/4	29 3/8	117 3/8	102 3/8	73 3/8	102 3/4	76 3/4	106	

DOWN-BLAST DISCHARGE

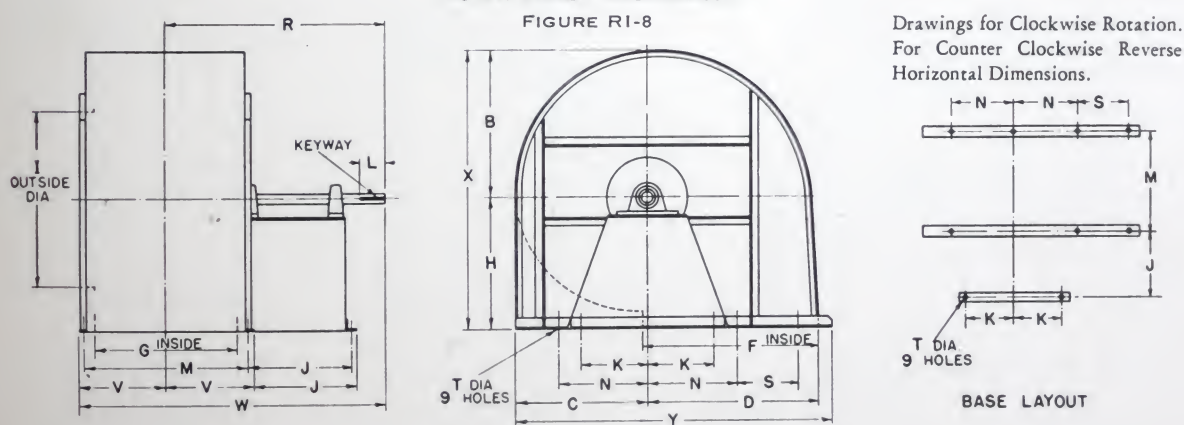


TABLE RI-8

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	B	C	D	F	G	H	I	J	K	L	M	N	S	T	V	X	Y	BALL BEARING		Oil Ring Sleeve Bearing	
																						R	W	R	W
FC & BI	33	33	2 1/8	1/2 X 1/4	27 3/4	24 1/8	32 1/8	33 3/4	26 3/4	24 1/4	34	17 1/8	13	4	30 3/4	17	13	16 3/8	52 3/8	59 1/8	37 1/8	52 1/4	39 1/8	54 1/4	
FC & BI	36	36	2 1/8	1/2 X 1/4	30 1/8	26 1/8	35 3/8	36 3/4	28 3/4	26	37	18 1/8	14	4	32 3/4	18	14	17 3/8	56 3/8	64 1/8	40 1/8	56 3/4	42 1/8	58 3/8	
FC & BI	40	40 1/2	2 1/8	3/4 X 1/8	34 1/8	29 1/8	39 3/8	40 3/4	32 1/4	28 3/4	41 1/4	20 1/2	17	5	36 3/8	21	14	19 3/8	62 3/8	72 1/8	43 1/8	62 1/4	46 1/8	64 1/4	
FC & BI	44	44 1/2	2 1/8	3/4 X 1/8	37 1/8	33 1/8	43 3/8	44 3/4	35 3/4	32	45 3/4	22 1/2	19	5	39 3/8	23	15	20 3/4	69 1/8	79 1/8	48 1/8	68 3/4	51 1/8	71	
FC & BI	49	49	2 1/8	3/4 X 3/8	41 1/8	36 1/8	48 3/8	49 3/4	39 1/4	34 3/4	50	25 1/2	21	5	43	25	16	22 3/4	76 1/8	87 1/8	54 1/8	76 3/4	57 1/8	79 3/4	
FC & BI	54	54	2 1/8	3/4 X 3/8	45 3/8	40 3/8	53 3/8	54 3/4	43 1/4	37 3/4	55	27 3/4	21	6	47 3/8	27	18	25 1/4	83 3/8	95 3/8	59 3/8	84 3/4	63	87 3/8	
FC & BI	60	60	3 1/8	3/4 X 3/8	50 3/8	44 3/8	59 3/8	60 3/4	47 3/4	42 3/4	61	30 3/4	24	6	52 3/8	30	22	27 3/4	93	106 3/8	66	93	69 3/4	96 3/4	
FC & BI	66	66	3 1/8	1 X 1/2	55 3/8	48 3/8	65 3/8	66 3/4	52 3/4	46	67	35	27	7	57	33	27	29 3/4	101 3/8	116 3/8	73 3/8	102 3/4	76 3/4	106	

* Diameter for sheave bore.

NOTE: All dimensions subject to change without notice. Where exact dimensions are required write for certified drawings.

ROUGHING-IN DIMENSIONS — ARRANGEMENT 2 — SIZES 10-30 TOP HORIZONTAL DISCHARGE

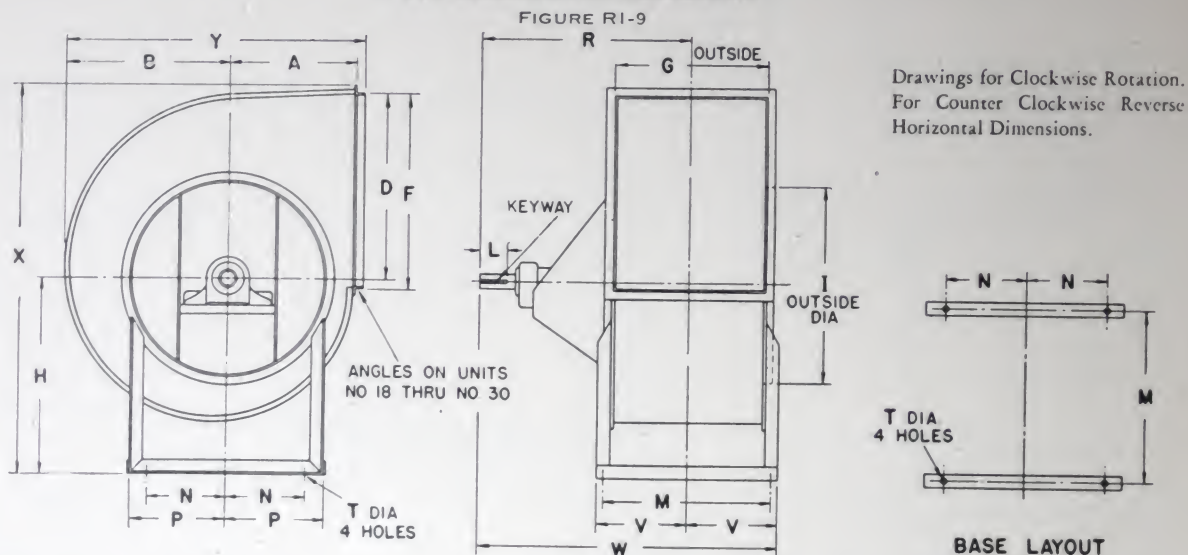


TABLE RI-9

FAN TYPE	FAN SIZE	WHEEL DIAM	SHAFT DIAM	KEY WAY	A	B	D	F	G	H	I	L	M	N	P	R	T	V	W	X	Y
FC ONLY	10	10	1/2	1/2 X 1/2	7 1/2	8 1/2	9 1/2	10 1/2	8 1/2	11	10 1/2	1 1/2	9 1/2	3 1/2	5	14	1/2	5 1/2	19 1/2	21 1/2	16 3/4
FC ONLY	12	12	1/2	1/2 X 1/2	8 1/2	10 1/2	11 1/2	12 1/2	9 1/2	13	12 1/2	1 1/2	11 1/2	4 1/2	5 1/2	14 1/2	1/2	6 1/2	20 1/2	25 1/2	19 1/2
FC & BI	15	15	1	1/2 X 1/2	10 1/2	13 1/2	14 1/2	15 1/2	12	16	16	2 1/2	13 1/2	6 1/2	7 1/2	17 1/2	1/2	7 1/2	24 1/2	31 1/2	23 1/2
FC & BI	18	18	1	3/4 X 3/4	12 1/2	15 1/2	17 1/2	18 1/2	14 1/2	19	19	2 1/2	16 1/2	7 1/2	9 1/2	21 1/2	1/2	8 1/2	30 1/2	37 1/2	29 1/2
FC & BI	21	21	1	3/4 X 3/4	14 1/2	18 1/2	20 1/2	21 1/2	17	22	22	2 1/2	18 1/2	8 1/2	10 1/2	22 1/2	1/2	10	32 1/2	43 1/2	34 1/2
FC & BI	24	24	1	1 X 1	16 1/2	20 1/2	23 1/2	24 1/2	19 1/2	26	25	3 1/2	21 1/2	10 1/2	12 1/2	22 1/2	1/2	11 1/2	34 1/2	50 1/2	38 1/2
FC & BI	27	27	1	1 X 1	18 1/2	23 1/2	26 1/2	27 1/2	21 1/2	29	28	3 1/2	23 1/2	11 1/2	14	26 1/2	1/2	12 1/2	39 1/2	56 1/2	43 1/2
FC & BI	30	30	1 1/2	1 1/2 X 1 1/2	20 1/2	26 1/2	29 1/2	30 1/2	24 1/2	32	31	4	26 1/2	12 1/2	15 1/2	27 1/2	1/2	14 1/2	42 1/2	62 1/2	47 1/2

UP-BLAST DISCHARGE

FIGURE RI-10

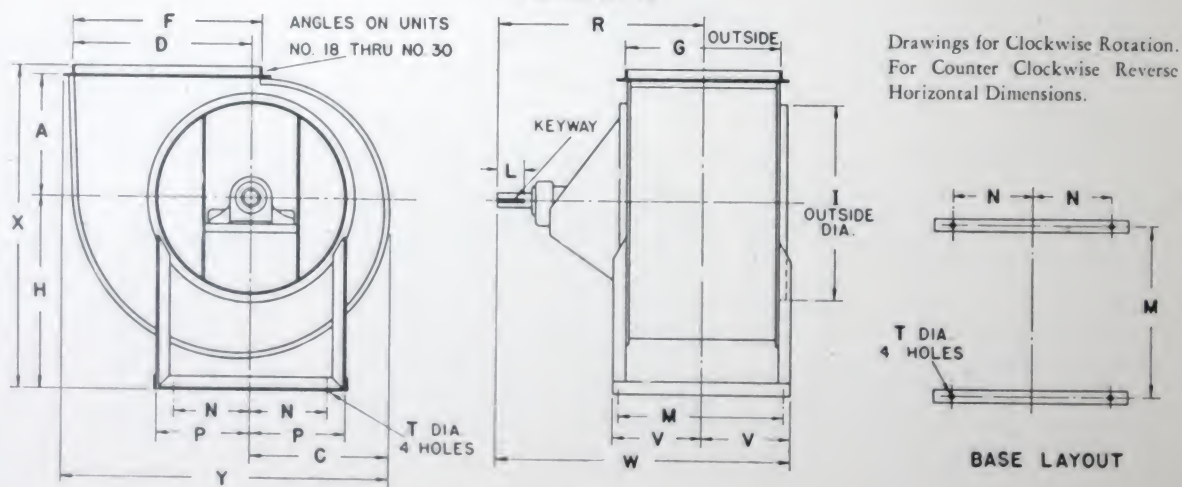


TABLE RI-10

FAN TYPE	FAN SIZE	WHEEL DIAM	SHAFT DIAM	KEY WAY	A	C	D	F	G	H	I	L	M	N	P	R	T	V	W	X	Y
FC ONLY	10	10	1/2	1/2 X 1/2	7 1/2	7 1/2	9 1/2	10 1/2	8 1/2	11	10 1/2	1 1/2	9 1/2	3 1/2	5	14	1/2	5 1/2	19 1/2	18 1/2	18 1/2
FC ONLY	12	12	1/2	1/2 X 1/2	8 1/2	9 1/2	11 1/2	12 1/2	9 1/2	13	12 1/2	1 1/2	11 1/2	4 1/2	5 1/2	14 1/2	1/2	6 1/2	20 1/2	21 1/2	21 1/2
FC & BI	15	15	1	1/2 X 1/2	10 1/2	11 1/2	14 1/2	15 1/2	12	16	16	2 1/2	13 1/2	6 1/2	7 1/2	17 1/2	1/2	7 1/2	24 1/2	26 1/2	26 1/2
FC & BI	18	18	1	1/2 X 1/2	12 1/2	13 1/2	17 1/2	18 1/2	14 1/2	19	19	2 1/2	16 1/2	7 1/2	9 1/2	21 1/2	1/2	8 1/2	30 1/2	32 1/2	32 1/2
FC & BI	21	21	1	3/4 X 3/4	14 1/2	16 1/2	20 1/2	21 1/2	17	22	22	2 1/2	18 1/2	8 1/2	10 1/2	22 1/2	1/2	10	32 1/2	37 1/2	37 1/2
FC & BI	24	24	1	1 X 1	16 1/2	18 1/2	23 1/2	24 1/2	19 1/2	26	25	3 1/2	21 1/2	10 1/2	12 1/2	22 1/2	1/2	11 1/2	34 1/2	43 1/2	43 1/2
FC & BI	27	27	1	1 X 1	18 1/2	20 1/2	26 1/2	27 1/2	21 1/2	29	28	3 1/2	23 1/2	11 1/2	14	26 1/2	1/2	12 1/2	39 1/2	48 1/2	48 1/2
FC & BI	30	30	1 1/2	1 1/2 X 1 1/2	20 1/2	22 1/2	29 1/2	30 1/2	24 1/2	32	31	4	26 1/2	12 1/2	15 1/2	27 1/2	1/2	14 1/2	42 1/2	53 1/2	53 1/2

Note: All dimensions subject to change without notice. Where exact dimensions are required write for certified drawings.

ROUGHING-IN DIMENSIONS — ARRANGEMENT 2 — SIZES 10-30

BOTTOM HORIZONTAL DISCHARGE

FIGURE RI-11

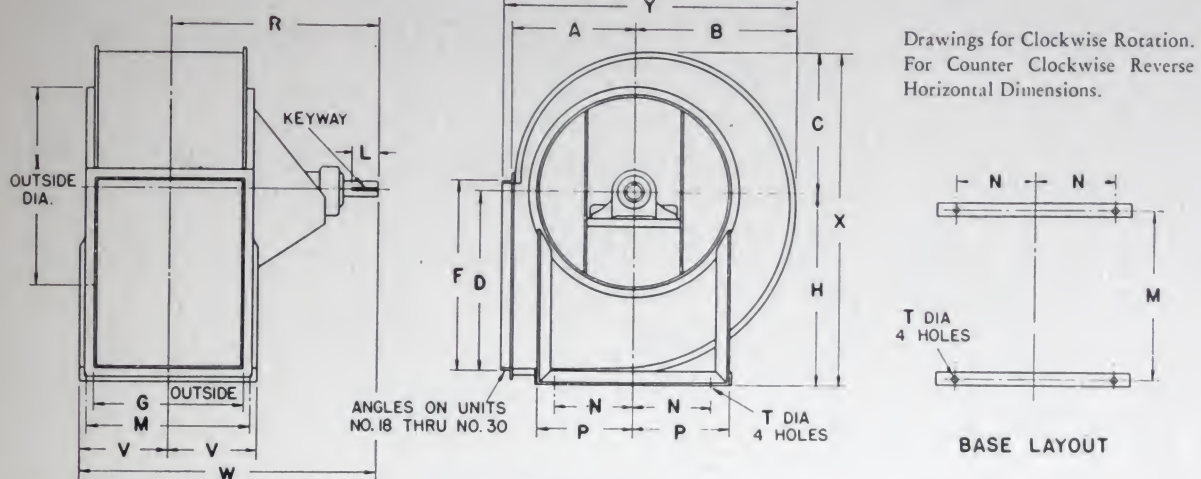


TABLE RI-11

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	B	C	D	F	G	H	I	L	M	N	P	R	T	V	W	X	Y
FC ONLY	10	10	1/2	3/4 X 3/8	7 1/2	8 1/4	7 1/4	9 1/4	10 1/4	8 1/4	11	10 1/2	1 1/2	9 1/4	3 1/4	5	14	1/2	5 1/4	19 1/4	18 3/4	16 1/4
FC ONLY	12	12	1/2	3/4 X 3/8	8 1/2	10 1/4	9 1/4	11 1/4	12 1/4	9 1/4	13	12 1/2	1 1/2	11 1/4	4 1/4	5 1/4	14 1/4	1/2	6 1/4	20 1/4	22 1/4	19 1/4
FC & BI	15	15	1 1/4	3/4 X 3/8	10 3/4	13 1/4	11 3/4	14 1/4	15 1/4	12	16	16	2 1/2	13 1/4	6 1/2	7 1/4	17 1/4	1/2	7 3/4	24 1/4	27 1/4	23 1/4
FC & BI	18	18	1 1/2	3/4 X 3/8	12 3/4	15 1/4	13 3/4	17 1/4	18 1/4	14 1/4	19	19	2 1/2	16 1/4	7 1/2	9 1/4	21 1/4	1/2	8 3/4	30 1/4	32 1/4	29 1/4
FC & BI	21	21	1 3/4	3/4 X 3/8	14 3/4	18 1/4	16 3/4	20 3/4	21 3/4	17	22	22	2 1/2	18 1/4	8 1/2	10 1/4	22 1/4	1/2	10	32 1/4	38 1/4	34 1/4
FC & BI	24	24	1 3/4	3/4 X 3/8	16 3/4	20 1/4	18 3/4	23 1/4	24 1/4	19 1/4	26	25	3 1/2	21 1/4	10 1/2	12 1/4	22 1/4	1/2	11 1/4	34 1/4	44 1/4	38 1/4
FC & BI	27	27	1 3/4	3/4 X 3/8	18 3/4	23 1/4	20 3/4	26 1/4	27 1/4	21 1/4	29	28	3 1/2	23 1/4	11 1/2	14	26 1/4	1/2	12 1/4	39 1/4	49 1/4	43 1/4
FC & BI	30	30	1 3/4	3/4 X 3/8	20 3/4	26	22 1/4	29 1/4	30 1/4	24 1/4	32	31	4	26 1/4	12 1/2	15 1/2	27 1/4	1/2	14 1/4	42 1/4	54 1/4	47 1/4

DOWN-BLAST DISCHARGE

FIGURE RI-12

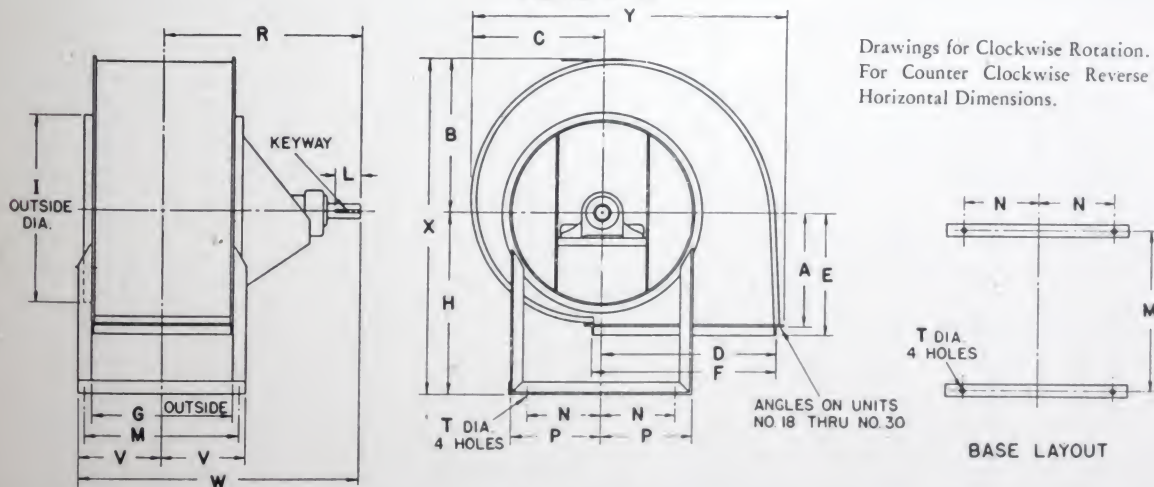


TABLE RI-12

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	B	C	D	E	F	G	H	I	L	M	N	P	R	T	V	W	X	Y
FC ONLY	10	10	1/2	3/4 X 3/8	7 1/2	8 1/4	7 1/4	9 1/4	7 1/2	10 1/4	8 1/4	11	10 1/2	1 1/2	9 1/4	3 1/4	5	14	1/2	5 1/4	19 1/4	19 1/4	18 1/4
FC ONLY	12	12	1/2	3/4 X 3/8	8 1/2	10 1/4	9 1/4	11 1/4	8 1/2	12 1/4	9 1/4	13	12 1/2	1 1/2	11 1/4	4 1/4	5 1/4	14 1/4	1/2	6 1/4	20 1/4	23 1/4	21 1/4
FC & BI	15	15	1 1/4	3/4 X 3/8	10 3/4	13 1/4	11 3/4	14 1/4	10 3/4	15 1/4	12	16	16	2 1/2	13 1/4	6 1/2	7 1/4	17 1/4	1/2	7 3/4	24 1/4	29 1/4	26 1/4
FC & BI	18	18	1 1/2	3/4 X 3/8	12 3/4	15 1/4	13 3/4	17 1/4	13 3/4	18 1/4	14 1/4	19	19	2 1/2	16 1/4	7 1/2	9 1/4	21 1/4	1/2	8 3/4	30 1/4	34 1/4	32 1/4
FC & BI	21	21	1 3/4	3/4 X 3/8	14 3/4	18 1/4	16 3/4	20 3/4	15 3/4	21 3/4	17	22	22	2 1/2	18 1/4	8 1/2	10 1/4	22 1/4	1/2	10	32 1/4	40 1/4	37 1/4
FC & BI	24	24	1 3/4	3/4 X 3/8	16 3/4	20 1/4	18 3/4	23 1/4	17 3/4	24 1/4	19 1/4	26	25	3 1/2	21 1/4	10 1/2	12 1/4	22 1/4	1/2	11 1/4	34 1/4	46 1/4	43 1/4
FC & BI	27	27	1 3/4	3/4 X 3/8	18 3/4	23 1/4	20 3/4	26 1/4	19 3/4	27 1/4	21 1/4	29	28	3 1/2	23 1/4	11 1/2	14	26 1/4	1/2	12 1/4	39 1/4	52 1/4	48 1/4
FC & BI	30	30	1 3/4	3/4 X 3/8	20 3/4	26	22 1/4	29 1/4	21 3/4	30 1/4	24 1/4	32	31	4	26 1/4	12 1/2	15 1/2	27 1/4	1/2	14 1/4	42 1/4	58 1/4	53 1/4

NOTE: All dimensions subject to change without notice. Where exact dimensions are required write for certified drawings.

ROUGHING-IN DIMENSIONS — ARRANGEMENT 3 — SIZES 6-30 SINGLE WIDTH SINGLE INLET — TOP HORIZONTAL DISCHARGE

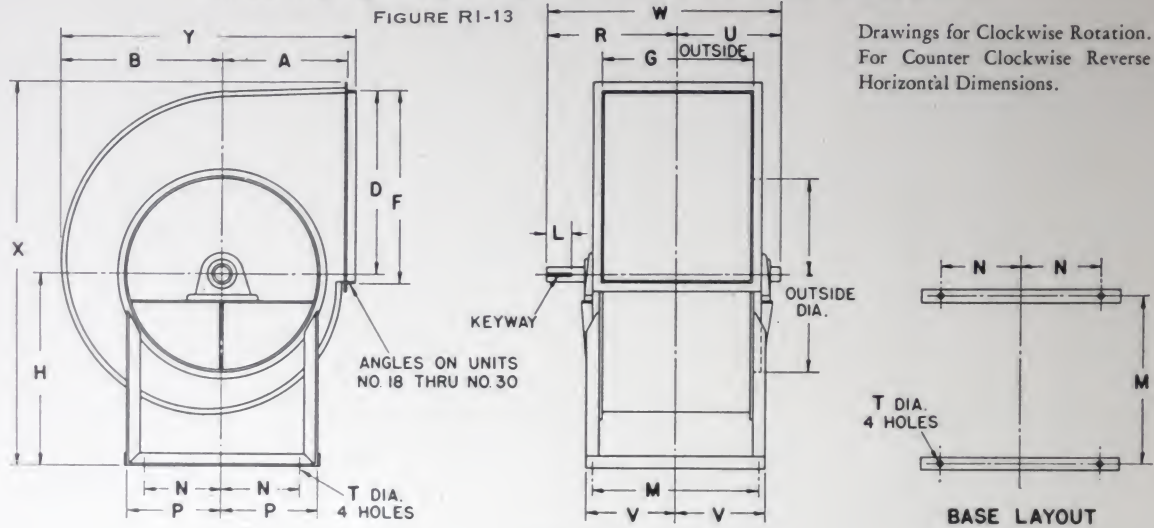


TABLE RI-13

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	B	D	F	G	H	I	L	M	N	P	T	V	X	Y	BALL BEARING			SLEEVE BEARING		
																				R	U	W	R	U	W
FC ONLY	8	8	3/8	NONE	6 1/4	7 1/4	8 1/4	8 3/4	6 1/2	9	8 1/2		7 3/4	3	4	1 1/2	4 1/4	17 1/4	13 1/4	7 1/4	5 1/4	12 3/4	8	5 1/4	13 3/4
FC ONLY	10	10	1/2	1/4 X 3/8	7 1/4	8 3/4	9 3/4	10 3/4	8 3/4	11	10 1/2	1 1/2	9 3/4	3 3/4	5	1 3/4	5 1/4	21 1/4	16 3/4	8	6 1/4	14 3/4	9 3/4	7 1/4	16 3/4
FC ONLY	12	12	5/8	1/2 X 3/4	8 1/4	10 3/4	11 3/4	12 3/4	9 3/4	13	12 1/2	1 1/2	11 3/4	4 3/4	5 3/4	1 3/4	6 1/4	25 1/4	19 3/4	8 1/4	6 1/4	15 3/4	10 3/4	7 1/4	18 3/4
FC & BI	15	15	1	3/4 X 1/2	10 3/4	13 3/4	14 3/4	15 3/4	12	16	16	2 1/2	13 3/4	6 3/4	7 3/4	1 3/4	7 3/4	31 1/4	23 3/4	11 3/4	8 3/4	20	13 3/4	9 3/4	23
FC & BI	18	18	1 1/8	1 X 1/2	12 3/4	15 3/4	17 3/4	18 3/4	14 3/4	19	19	2 1/2	16 3/4	7 3/4	9 3/4	1 3/4	8 3/4	37 1/4	29 3/4	12 3/4	9 3/4	22 3/4	17	14 3/4	31 3/4
FC & BI	21	21	1 1/4	1 1/4 X 1	14 3/4	18 3/4	20 3/4	21 3/4	17	22	22	2 1/2	18 3/4	8 3/4	10 3/4	1 3/4	10	43 1/4	34 3/4	13 3/4	11 3/4	25	18 3/4	15 3/4	33 3/4
FC & BI	24	24	1 1/2	1 1/2 X 1 1/4	16 3/4	20 3/4	23 3/4	24 3/4	19 3/4	26	25	3 3/4	21 3/4	10 3/4	12 3/4	1 3/4	11 3/4	50 3/4	38 3/4	16 3/4	12 3/4	28 3/4	19 3/4	15 3/4	35 3/4
FC & BI	27	27	1 3/4	1 3/4 X 1 1/2	18 3/4	23 3/4	26 3/4	27 3/4	21 3/4	29	28	3 3/4	23 3/4	11 3/4	14	1 3/4	12 3/4	56 3/4	43	17 3/4	13 3/4	31 3/4	20 3/4	16 3/4	37
FC & BI	30	30	2	2 X 1 1/2	20 3/4	26 3/4	29 3/4	30 3/4	24 3/4	32	31	4	26 3/4	12 3/4	15 3/4	1 3/4	14 3/4	62 3/4	47 3/4	20 3/4	15	35 3/4	22 3/4	17 3/4	40 3/4

SINGLE WIDTH SINGLE INLET — UP-BLAST DISCHARGE

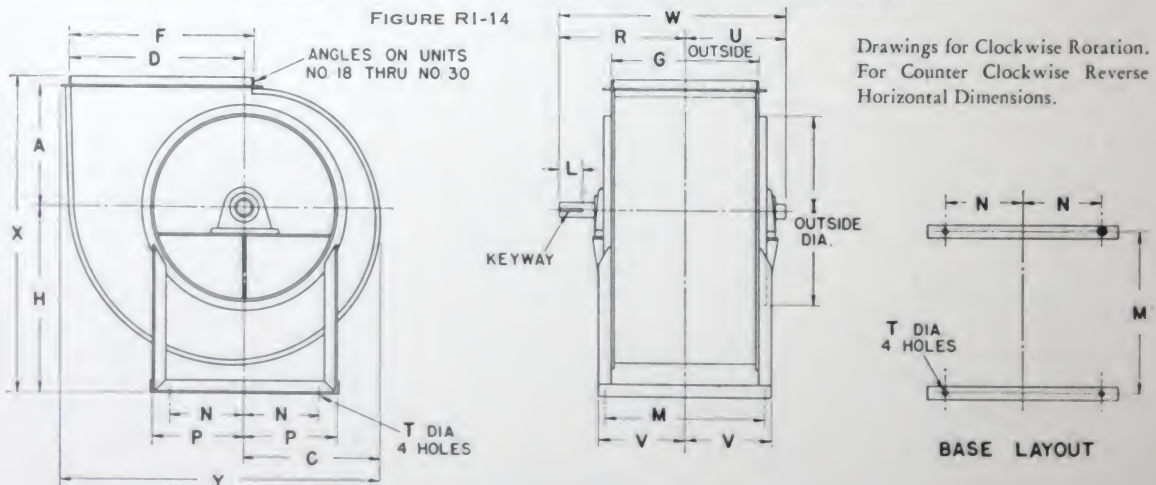


TABLE RI-14

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	C	D	F	G	H	I	L	M	N	P	T	V	X	Y	BALL BEARING			SLEEVE BEARING		
																				R	U	W	R	U	W
FC ONLY	8	8	3/8	NONE	6 1/4	6 1/4	8 1/4	8 3/4	6 1/2	9	8 1/2		7 3/4	3	4	1 1/2	4 1/4	15 1/4	14 1/4	7 1/4	5 1/4	12 3/4	8	5 1/4	13 3/4
FC ONLY	10	10	1/2	1/4 X 3/8	7 1/4	7 1/4	9 3/4	10 3/4	8 3/4	11	10 1/2	1 1/2	9 3/4	3 3/4	5	1 3/4	5 1/4	18 3/4	18 3/4	8	6 1/4	14 3/4	9 3/4	7 1/4	16 3/4
FC ONLY	12	12	5/8	1/2 X 3/4	8 1/4	8 1/4	11 3/4	12 3/4	9 3/4	13	12 1/2	1 1/2	11 3/4	4 3/4	5 3/4	1 3/4	6 1/4	21 1/4	21 1/4	8 1/4	6 1/4	15 3/4	10 3/4	7 1/4	18 3/4
FC & BI	15	15	1	3/4 X 1/2	10 3/4	11 3/4	14 3/4	15 3/4	12	16	16	2 1/2	13 3/4	6 3/4	7 3/4	1 3/4	7 3/4	26 3/4	26 3/4	11 3/4	8 3/4	20	13 3/4	9 3/4	23
FC & BI	18	18	1 1/8	1 X 1/2	12 3/4	13 3/4	17 3/4	18 3/4	14 3/4	19	19	2 1/2	16 3/4	7 3/4	9 3/4	1 3/4	8 3/4	32 3/4	32 3/4	12 3/4	9 3/4	22 3/4	17	14 3/4	31 3/4
FC & BI	21	21	1 1/4	1 1/4 X 1	14 3/4	16 3/4	20 3/4	21 3/4	17	22	22	2 1/2	18 3/4	8 3/4	10 3/4	1 3/4	10	37 3/4	37 3/4	13 3/4	11 3/4	25	18 3/4	15 3/4	33 3/4
FC & BI	24	24	1 1/2	1 1/2 X 1 1/4	16 3/4	18 3/4	23 3/4	24 3/4	19 3/4	26	25	3 3/4	21 3/4	10 3/4	12 3/4	1 3/4	11 3/4	43 3/4	43 3/4	16 3/4	12 3/4	28 3/4	19 3/4	15 3/4	35 3/4
FC & BI	27	27	1 3/4	1 3/4 X 1 1/2	18 3/4	20 3/4	26 3/4	27 3/4	21 3/4	29	28	3 3/4	23 3/4	11 3/4	14	1 3/4	12 3/4	48 3/4	48 3/4	17 3/4	13 3/4	31 3/4	20 3/4	16 3/4	37
FC & BI	30	30	2	2 X 1 1/2	20 3/4	22 3/4	29 3/4	30 3/4	24 3/4	32	31	4	26 3/4	12 3/4	15 3/4	1 3/4	14 3/4	53 3/4	53 3/4	20 3/4	15	35 3/4	22 3/4	17 3/4	40 3/4

Note: All dimensions subject to change without notice. Where exact dimensions are required write for certified drawings.

ROUGHING-IN DIMENSIONS — ARRANGEMENT 3 — SIZES 6-30

SINGLE WIDTH SINGLE INLET — BOTTOM HORIZONTAL DISCHARGE

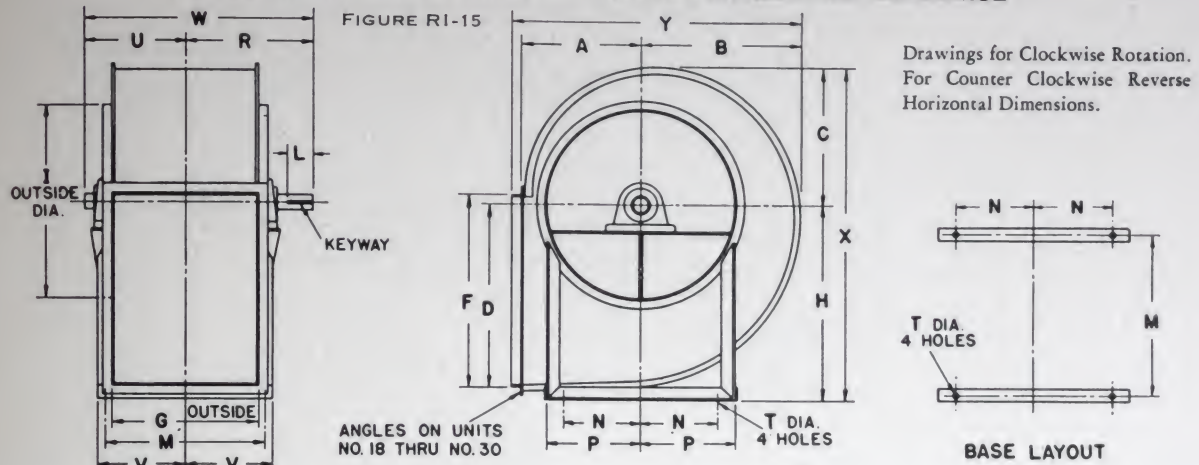


TABLE RI-15

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	B	C	D	F	G	H	I	L	M	N	P	T	V	X	Y	BALL BEARING			SLEEVE BEARING		
																					R	U	W	R	U	W
FC ONLY	8	8	1/2	NONE	6 1/2	7 1/2	6 3/4	8 1/2	8 3/4	6 1/2	9	8 1/2		7 3/4	3	4	1/2	4 1/2	15 3/4	13 1/2	7 1/2	5 1/4	12 3/4	8	5 3/4	13 3/4
FC ONLY	10	10	1/2	1/2 X 3/4	7 1/2	8 3/4	7 3/4	9 1/2	10 3/4	8 1/2	11	10 1/2	1 1/2	9 1/2	3 1/2	5	1/2	5 1/2	18 3/4	16 3/4	8	6 1/4	14 3/4	9 1/2	7 1/2	16 1/2
FC ONLY	12	12	1/2	1/2 X 3/4	8 1/2	10 3/4	9 1/2	11 1/2	12 3/4	9 1/2	13	12 1/2	1 1/2	11 1/2	4 1/2	5 1/2	1/2	6 1/2	22 3/4	19 3/4	8 1/2	6 1/2	15 3/4	10 3/4	7 1/2	18 1/2
FC & BI	15	15	1 1/4	1/2 X 3/4	10 3/4	13 1/4	11 3/4	14 1/2	15 3/4	12	16	16	2 1/2	13 1/2	6 1/2	7 3/4	1/2	7 3/4	27 3/4	23 3/4	11 1/2	8 1/2	20	13 1/2	9 1/2	23
FC & BI	18	18	1 1/4	3/4 X 1 1/2	12 3/4	15 3/4	13 3/4	17 1/2	18 3/4	14 3/4	19	19	2 1/2	16 1/2	7 3/4	9 1/2	1/2	8 3/4	32 3/4	29 3/4	12 3/4	9 1/2	22 3/4	17	14 3/4	31 1/2
FC & BI	21	21	1 1/4	3/4 X 1 1/2	14 3/4	18 3/4	16 3/4	20 3/4	21 3/4	17	22	22	2 1/2	18 1/2	8 3/4	10 3/4	1/2	10	38 3/4	34 3/4	13 1/2	11 1/2	25	18 1/2	15 3/4	33 3/4
FC & BI	24	24	1 1/4	3/4 X 1 1/2	16 3/4	20 3/4	18 3/4	23 3/4	24 3/4	19 3/4	26	25	3 1/2	21 1/2	10 3/4	12 1/2	1/2	11 1/2	44 3/4	38 3/4	16 3/4	12 3/4	28 3/4	19 1/2	15 3/4	35 3/4
FC & BI	27	27	1 1/4	3/4 X 1 1/2	18 3/4	23 3/4	20 3/4	26 3/4	27 3/4	21 3/4	29	28	3 1/2	23 1/2	11 3/4	14	1/2	12 1/2	49 1/2	43 1/2	17 3/4	13 3/4	31 3/4	20 3/4	16 3/4	37
FC & BI	30	30	1 1/4	3/4 X 1 1/2	20 3/4	26	22 3/4	29 3/4	30 3/4	24 3/4	32	31	4	26 1/2	12 3/4	15 3/4	1/2	14 3/4	54 1/2	47 1/2	20 3/4	15	35 3/4	22 3/4	17 3/4	40 3/4

SINGLE WIDTH SINGLE INLET — DOWN-BLAST DISCHARGE

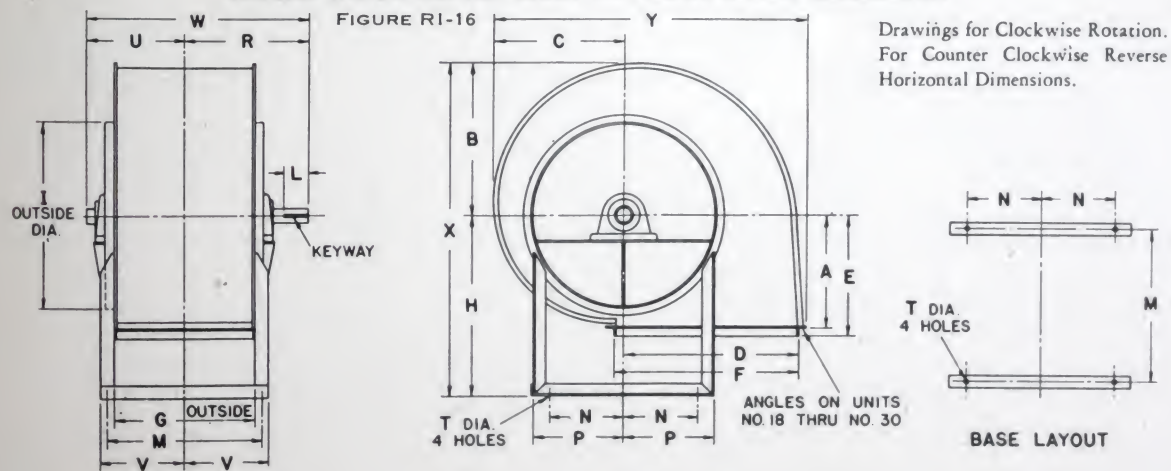


TABLE RI-16

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	B	C	D	E	F	G	H	I	L	M	N	P	T	V	X	Y	BALL BEARING			SLEEVE BEARING		
																						R	U	W	R	U	W
FC Only	8	8	$\frac{1}{2}$	NONE	6 $\frac{1}{2}$	7 $\frac{1}{2}$	6 $\frac{3}{4}$	8 $\frac{1}{2}$	6 $\frac{1}{2}$	8 $\frac{1}{2}$	6 $\frac{1}{2}$	9	8 $\frac{1}{2}$		7 $\frac{3}{4}$	3	4	$\frac{1}{2}$	4 $\frac{1}{2}$	16 $\frac{1}{2}$	14 $\frac{1}{2}$	7 $\frac{1}{2}$	5 $\frac{1}{4}$	12 $\frac{3}{4}$	8	5 $\frac{3}{4}$	13 $\frac{3}{4}$
FC Only	10	10	$\frac{1}{2}$	$\frac{1}{2}$ X $\frac{3}{4}$	7 $\frac{1}{2}$	8 $\frac{3}{4}$	7 $\frac{3}{4}$	9 $\frac{1}{2}$	7 $\frac{1}{2}$	10 $\frac{3}{4}$	8 $\frac{1}{2}$	11	10 $\frac{1}{2}$	1 $\frac{1}{2}$	9 $\frac{1}{2}$	3 $\frac{1}{2}$	5	$\frac{1}{2}$	5 $\frac{1}{2}$	19 $\frac{3}{4}$	18 $\frac{3}{4}$	8	6 $\frac{1}{4}$	14 $\frac{3}{4}$	9 $\frac{1}{2}$	7 $\frac{1}{2}$	16 $\frac{1}{2}$
FC Only	12	12	$\frac{1}{2}$	$\frac{1}{2}$ X $\frac{3}{4}$	8 $\frac{1}{2}$	10 $\frac{3}{4}$	9 $\frac{1}{2}$	11 $\frac{1}{2}$	8 $\frac{1}{2}$	12 $\frac{3}{4}$	9 $\frac{1}{2}$	13	12 $\frac{1}{2}$	1 $\frac{1}{2}$	11 $\frac{1}{2}$	4 $\frac{1}{2}$	5 $\frac{1}{2}$	$\frac{1}{2}$	6 $\frac{1}{2}$	23 $\frac{3}{4}$	21 $\frac{3}{4}$	8 $\frac{1}{2}$	6 $\frac{1}{2}$	15 $\frac{3}{4}$	10 $\frac{3}{4}$	7 $\frac{1}{2}$	18 $\frac{1}{2}$
FC&BI	15	15	1 $\frac{1}{4}$	$\frac{1}{2}$ X $\frac{3}{4}$	10 $\frac{3}{4}$	13 $\frac{1}{4}$	11 $\frac{3}{4}$	14 $\frac{1}{2}$	10 $\frac{3}{4}$	15 $\frac{3}{4}$	12	16	16	2 $\frac{1}{2}$	13 $\frac{1}{2}$	6 $\frac{1}{2}$	7 $\frac{3}{4}$	$\frac{1}{2}$	7 $\frac{3}{4}$	29 $\frac{3}{4}$	26 $\frac{3}{4}$	11 $\frac{1}{2}$	8 $\frac{1}{2}$	20	13 $\frac{1}{2}$	9 $\frac{1}{2}$	23
FC&BI	18	18	1 $\frac{1}{4}$	$\frac{3}{4}$ X $\frac{1}{2}$	12 $\frac{3}{4}$	15 $\frac{3}{4}$	13 $\frac{3}{4}$	17 $\frac{1}{2}$	13 $\frac{3}{4}$	18 $\frac{3}{4}$	14 $\frac{3}{4}$	19	19	2 $\frac{1}{2}$	16 $\frac{1}{2}$	7 $\frac{3}{4}$	9 $\frac{1}{2}$	$\frac{1}{2}$	8 $\frac{3}{4}$	34 $\frac{3}{4}$	32 $\frac{3}{4}$	12 $\frac{3}{4}$	9 $\frac{1}{2}$	22 $\frac{3}{4}$	17	14 $\frac{3}{4}$	31 $\frac{1}{2}$
FC&BI	21	21	1 $\frac{1}{4}$	$\frac{3}{4}$ X $\frac{1}{2}$	14 $\frac{3}{4}$	18 $\frac{3}{4}$	16 $\frac{3}{4}$	20 $\frac{3}{4}$	15 $\frac{3}{4}$	21 $\frac{1}{2}$	17	22	22	2 $\frac{1}{2}$	18 $\frac{1}{2}$	8 $\frac{3}{4}$	10 $\frac{3}{4}$	$\frac{1}{2}$	10	40 $\frac{3}{4}$	37 $\frac{3}{4}$	13 $\frac{1}{2}$	11 $\frac{1}{2}$	25	18 $\frac{1}{2}$	15 $\frac{3}{4}$	33 $\frac{1}{2}$
FC&BI	24	24	1 $\frac{1}{2}$	$\frac{3}{4}$ X $\frac{1}{2}$	16 $\frac{3}{4}$	20 $\frac{3}{4}$	18 $\frac{3}{4}$	23 $\frac{3}{4}$	17 $\frac{3}{4}$	24 $\frac{3}{4}$	19 $\frac{3}{4}$	26	25	3 $\frac{1}{2}$	21 $\frac{1}{2}$	10 $\frac{3}{4}$	12 $\frac{1}{2}$	$\frac{1}{2}$	11 $\frac{1}{2}$	46 $\frac{3}{4}$	43 $\frac{3}{4}$	16 $\frac{3}{4}$	12 $\frac{3}{4}$	28 $\frac{3}{4}$	19 $\frac{1}{2}$	15 $\frac{3}{4}$	35 $\frac{3}{4}$
FC&BI	27	27	1 $\frac{1}{2}$	$\frac{3}{4}$ X $\frac{1}{2}$	18 $\frac{3}{4}$	23 $\frac{3}{4}$	20 $\frac{3}{4}$	26 $\frac{3}{4}$	19 $\frac{3}{4}$	27 $\frac{3}{4}$	21 $\frac{3}{4}$	29	28	3 $\frac{1}{2}$	23 $\frac{1}{2}$	11 $\frac{3}{4}$	14	$\frac{1}{2}$	12 $\frac{1}{2}$	52 $\frac{3}{4}$	48 $\frac{3}{4}$	17 $\frac{3}{4}$	13 $\frac{3}{4}$	31 $\frac{3}{4}$	20 $\frac{3}{4}$	16 $\frac{3}{4}$	37
FC&BI	30	30	1 $\frac{1}{2}$	$\frac{3}{4}$ X $\frac{1}{2}$	20 $\frac{3}{4}$	26	22 $\frac{3}{4}$	29 $\frac{3}{4}$	21 $\frac{3}{4}$	30 $\frac{3}{4}$	24 $\frac{3}{4}$	32	31	4	26 $\frac{1}{2}$	12 $\frac{3}{4}$	15 $\frac{3}{4}$	$\frac{1}{2}$	14 $\frac{3}{4}$	58	53 $\frac{3}{4}$	20 $\frac{3}{4}$	15	35 $\frac{3}{4}$	22 $\frac{3}{4}$	17 $\frac{3}{4}$	40 $\frac{3}{4}$

NOTE: All dimensions subject to change without notice. Where exact dimensions are required write for certified drawings.

ROUGHING-IN DIMENSIONS — ARRANGEMENT 3 — SIZES 6-30 DOUBLE WIDTH DOUBLE INLET — TOP HORIZONTAL DISCHARGE

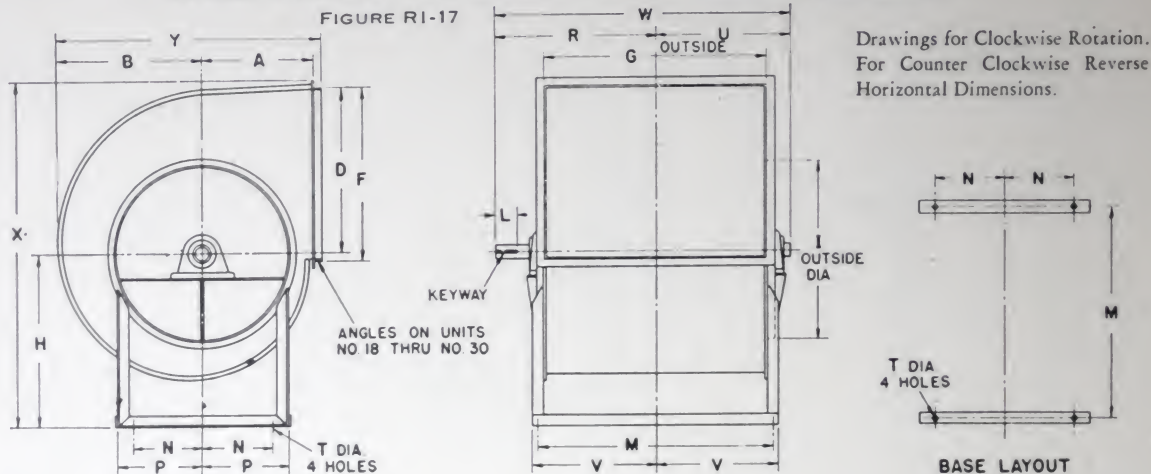


TABLE RI-17

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	B	D	F	G	H	I	L	M	N	P	T	V	X	Y	BALL BEARING			SLEEVE BEARING		
																				R	U	W	R	U	W
FC ONLY	8	8		NONE	6 1/2	7 1/2	8 1/2	8 1/2	10 1/2	9	8 1/2	12 1/2	3	4	1/2	6 1/2	17 1/2	13 1/2	9 1/2	7 1/2	17 1/2	10 1/2	7 1/2	18 1/2	
FC ONLY	10	10		1/2 X 1/2	7 1/2	8 1/2	9 1/2	10 1/2	13 1/2	11	10 1/2	14 1/2	3 1/2	5	1/2	7 1/2	21 1/2	16 1/2	11 1/2	8 1/2	20 1/2	13	9 1/2	22 1/2	
FC ONLY	12	12		1/2 X 1/2	8 1/2	10 1/2	11 1/2	12 1/2	16 1/2	13	12 1/2	17 1/2	4 1/2	5 1/2	1/2	9 1/2	25 1/2	19 1/2	13 1/2	10 1/2	23 1/2	14 1/2	11 1/2	25 1/2	
FC & BI	15	15	1	1/2 X 1/2	10 1/2	13 1/2	14 1/2	15 1/2	20 1/2	16	16	21 1/2	6 1/2	7 1/2	1/2	11 1/2	31 1/2	23 1/2	16 1/2	12 1/2	28 1/2	17 1/2	13 1/2	31 1/2	
FC & BI	18	18	1 1/2	1/2 X 1/2	12 1/2	15 1/2	17 1/2	18 1/2	24 1/2	19	19	26 1/2	7 1/2	9 1/2	1/2	13 1/2	37 1/2	29 1/2	19 1/2	14 1/2	34 1/2	23 1/2	19 1/2	42 1/2	
FC & BI	21	21	1 1/2	1/2 X 1/2	14 1/2	18 1/2	20 1/2	21 1/2	28 1/2	22	22	30 1/2	8 1/2	10 1/2	1/2	15 1/2	43 1/2	34 1/2	21 1/2	16 1/2	38 1/2	25 1/2	21 1/2	46 1/2	
FC & BI	24	24	1 1/2	1/2 X 1/2	16 1/2	20 1/2	23 1/2	24 1/2	35 1/2	26	26	37 1/2	10 1/2	12 1/2	1/2	19 1/2	50 1/2	38 1/2	25 1/2	20 1/2	46 1/2	28 1/2	23 1/2	52 1/2	
FC & BI	27	27	1 1/2	1/2 X 1/2	18 1/2	23 1/2	26 1/2	27 1/2	39 1/2	29	29	41 1/2	11 1/2	14	1/2	21 1/2	56 1/2	43 1/2	29 1/2	22 1/2	51 1/2	31 1/2	25 1/2	56 1/2	
FC & BI	30	30	1 1/2	1/2 X 1/2	20 1/2	26 1/2	29 1/2	30 1/2	44 1/2	32	32	46 1/2	12 1/2	15 1/2	1/2	24 1/2	62 1/2	47 1/2	31 1/2	24 1/2	56 1/2	33 1/2	27 1/2	60 1/2	

DOUBLE WIDTH DOUBLE INLET — UP-BLAST DISCHARGE

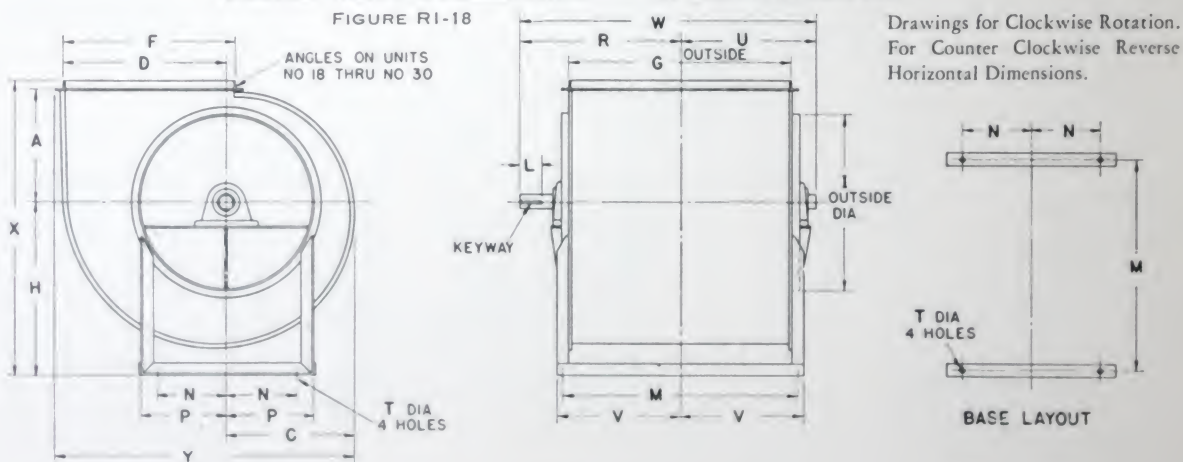


TABLE RI-18

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	C	D	F	G	H	I	L	M	N	P	T	V	X	Y	BALL BEARING			SLEEVE BEARING			
																				R	U	W	R	U	W	
FC ONLY	8	8		NONE	6 1/2	6 1/2	8 1/2	8 1/2	10 1/2	9	8 1/2		12 1/2	3	4	1/2	6 1/2	15 1/2	14 1/2	9 1/2	7 1/2	17 1/2	10 1/2	7 1/2	18 1/2	
FC ONLY	10	10		1/2 X 1/2	7 1/2	7 1/2	9 1/2	10 1/2	13 1/2	11	10 1/2	1 1/2	14 1/2	3 1/2	5	1/2	7 1/2	18 1/2	18 1/2	11 1/2	8 1/2	20 1/2	13	9 1/2	22 1/2	
FC ONLY	12	12		1/2 X 1/2	8 1/2	8 1/2	9 1/2	11 1/2	16 1/2	13	12 1/2	1 1/2	17 1/2	4 1/2	5 1/2	1/2	9 1/2	21 1/2	21 1/2	13 1/2	10 1/2	23 1/2	14 1/2	11 1/2	25 1/2	
FC & BI	15	15	1	1/2 X 1/2	10 1/2	10 1/2	14 1/2	15 1/2	20 1/2	16	16	2 1/2	21 1/2	6 1/2	7 1/2	1/2	11 1/2	26 1/2	26 1/2	16 1/2	12 1/2	28 1/2	17 1/2	13 1/2	31 1/2	
FC & BI	18	18	1 1/2	1/2 X 1/2	12 1/2	12 1/2	17 1/2	18 1/2	24 1/2	19	19	2 1/2	26 1/2	7 1/2	9 1/2	1/2	13 1/2	32 1/2	32 1/2	19 1/2	14 1/2	34 1/2	23 1/2	19 1/2	42 1/2	
FC & BI	21	21	1 1/2	1/2 X 1/2	14 1/2	14 1/2	16 1/2	20 1/2	21 1/2	22	22	2 1/2	30 1/2	8 1/2	10 1/2	1/2	15 1/2	37 1/2	37 1/2	21 1/2	16 1/2	38 1/2	25 1/2	21 1/2	46 1/2	
FC & BI	24	24	1 1/2	1/2 X 1/2	16 1/2	16 1/2	18 1/2	23 1/2	24 1/2	35 1/2	26	26	3 1/2	37 1/2	10 1/2	12 1/2	1/2	19 1/2	43 1/2	43 1/2	25 1/2	20 1/2	46 1/2	28 1/2	23 1/2	52 1/2
FC & BI	27	27	1 1/2	1/2 X 1/2	18 1/2	18 1/2	20 1/2	26 1/2	27 1/2	39 1/2	29	29	3 1/2	41 1/2	11 1/2	14	1/2	21 1/2	48 1/2	48 1/2	29 1/2	22 1/2	51 1/2	31 1/2	25 1/2	56 1/2
FC & BI	30	30	1 1/2	1/2 X 1/2	20 1/2	20 1/2	22 1/2	29 1/2	30 1/2	44 1/2	32	32	4 1/2	46 1/2	12 1/2	15 1/2	1/2	24 1/2	53 1/2	53 1/2	31 1/2	24 1/2	56 1/2	33 1/2	27 1/2	60 1/2

* Diameter at bearing and for sheave bore.

NOTE: All dimensions subject to change without notice. Where exact dimensions are required write for certified drawings.

ROUGHING-IN DIMENSIONS — ARRANGEMENT 3 — SIZES 6-30 DOUBLE WIDTH DOUBLE INLET — BOTTOM HORIZONTAL DISCHARGE

FIGURE RI-19

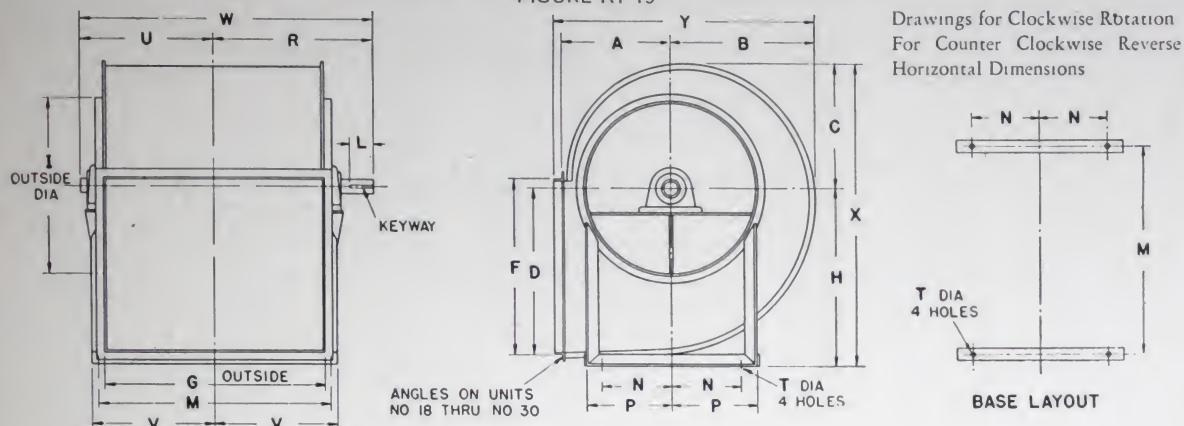


TABLE RI-19

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	B	C	D	F	G	H	I	L	M	N	P	T	V	X	Y	BALL BEARING			OIL RING SLEEVE BEARING		
																					R	U	W	R	U	W
FC ONLY	8	8	3/8	NONE	6 1/2	7 1/2	6 1/2	8 1/2	8 1/2	10 1/2	9	8 1/2		12 1/2	3	4	5	6 1/2	15 1/2	13 1/2	9 1/2	7 1/2	17 1/2	10 1/2	7 1/2	18 1/2
FC ONLY	10	10	1/2	1/2 X 3/4	7 1/2	8 1/2	7 1/2	9 1/2	10 1/2	13 1/2	11	10 1/2	1 1/2	14 1/2	3 1/2	5	7 1/2	18 1/2	16 1/2	11 1/2	8 1/2	20 1/2	13	9 1/2	22 1/2	
FC ONLY	12	12	1/2	1/2 X 3/4	8 1/2	10 1/2	9 1/2	11 1/2	12 1/2	16 1/2	13	12 1/2	1 1/2	17 1/2	4 1/2	5 1/2	9 1/2	22 1/2	19 1/2	13 1/2	10 1/2	23 1/2	14 1/2	11 1/2	25 1/2	
FC & BI	15	15	1 1/8	1 1/8 X 1	10 1/2	13 1/2	11 1/2	14 1/2	15 1/2	20 1/2	16	16 1/2	2 1/2	21 1/2	6 1/2	7 1/2	11 1/2	27 1/2	23 1/2	16 1/2	12 1/2	28 1/2	17 1/2	13 1/2	31 1/2	
FC & BI	18	18	1 1/8	1 1/8 X 1	12 1/2	15 1/2	13 1/2	17 1/2	18 1/2	24 1/2	19	19 1/2	2 1/2	26 1/2	7 1/2	9 1/2	13 1/2	32 1/2	29 1/2	19 1/2	14 1/2	34 1/2	23 1/2	19 1/2	42 1/2	
FC & BI	21	21	1 1/8	1 1/8 X 1	14 1/2	18 1/2	16 1/2	20 1/2	21 1/2	28 1/2	22	22 1/2	3 1/2	30 1/2	8 1/2	10 1/2	15 1/2	38 1/2	34 1/2	21 1/2	16 1/2	38 1/2	25 1/2	21 1/2	46 1/2	
FC & BI	24	24	1 1/8	1 1/8 X 1	16 1/2	20 1/2	18 1/2	23 1/2	24 1/2	35 1/2	26	25 1/2	3 1/2	37 1/2	10 1/2	12 1/2	19 1/2	44 1/2	38 1/2	25 1/2	20 1/2	46 1/2	28 1/2	23 1/2	52 1/2	
FC & BI	27	27	1 1/8	1 1/8 X 1	18 1/2	23 1/2	20 1/2	26 1/2	27 1/2	39 1/2	29	28 1/2	3 1/2	41 1/2	11 1/2	14 1/2	21 1/2	49 1/2	43 1/2	29 1/2	22 1/2	51 1/2	31 1/2	25 1/2	56 1/2	
FC & BI	30	30	1 1/8	1 1/8 X 1	20 1/2	26 1/2	22 1/2	29 1/2	30 1/2	44 1/2	32	31 1/2	4 1/2	46 1/2	12 1/2	15 1/2	24 1/2	54 1/2	47 1/2	31 1/2	24 1/2	56 1/2	33 1/2	27 1/2	60 1/2	

DOUBLE WIDTH DOUBLE INLET — DOWN-BLAST DISCHARGE

FIGURE RI-20

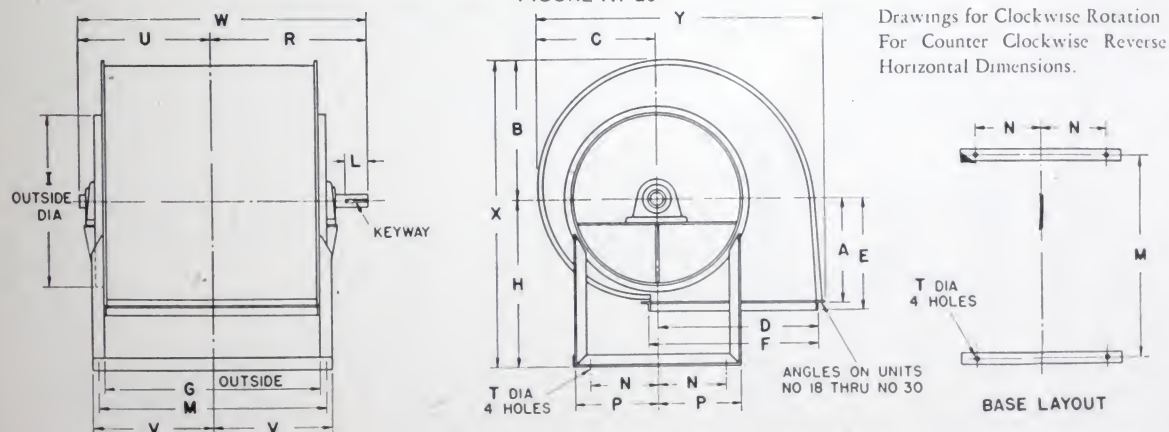


TABLE RI-20

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	B	C	D	E	F	G	H	I	L	M	N	P	T	V	X	Y	BALL BEARING			OIL RING SLEEVE BEARING			
																						R	U	W	R	U	W	
FC Only	8	8	$\frac{3}{8}$	NONE	$6\frac{1}{2}$	$7\frac{1}{2}$	$6\frac{1}{2}$	$8\frac{1}{2}$	$8\frac{1}{2}$	$10\frac{1}{2}$	9	$8\frac{1}{2}$		$12\frac{1}{2}$	3	4	5	$6\frac{1}{2}$	$16\frac{1}{2}$	$14\frac{1}{2}$	$9\frac{1}{2}$	$7\frac{1}{2}$	$17\frac{1}{2}$	$10\frac{1}{2}$	$7\frac{1}{2}$	$18\frac{1}{2}$		
FC Only	10	10	$\frac{1}{2}$	$\frac{1}{2} \times \frac{3}{4}$	$7\frac{1}{2}$	$8\frac{1}{2}$	$7\frac{1}{2}$	$9\frac{1}{2}$	$10\frac{1}{2}$	$13\frac{1}{2}$	11	$10\frac{1}{2}$	$1\frac{1}{2}$	$14\frac{1}{2}$	$3\frac{1}{2}$	5	$7\frac{1}{2}$	$19\frac{1}{2}$	$18\frac{1}{2}$	11	$8\frac{1}{2}$	$20\frac{1}{2}$	13	$9\frac{1}{2}$	$22\frac{1}{2}$			
FC Only	12	12	$\frac{1}{2}$	$\frac{1}{2} \times \frac{3}{4}$	$8\frac{1}{2}$	$10\frac{1}{2}$	9	$11\frac{1}{2}$	$12\frac{1}{2}$	$16\frac{1}{2}$	13	$12\frac{1}{2}$	$1\frac{1}{2}$	$17\frac{1}{2}$	4	$5\frac{1}{2}$	$9\frac{1}{2}$	$23\frac{1}{2}$	21	$13\frac{1}{2}$	$10\frac{1}{2}$	$23\frac{1}{2}$	14	$11\frac{1}{2}$	$25\frac{1}{2}$			
FC & BI	15	15	$1\frac{1}{8}$	$1\frac{1}{8} \times 1$	$10\frac{1}{2}$	$13\frac{1}{2}$	$11\frac{1}{2}$	$14\frac{1}{2}$	$15\frac{1}{2}$	$20\frac{1}{2}$	16	$16\frac{1}{2}$	$2\frac{1}{2}$	$21\frac{1}{2}$	$6\frac{1}{2}$	$7\frac{1}{2}$	$11\frac{1}{2}$	$29\frac{1}{2}$	26	$16\frac{1}{2}$	$12\frac{1}{2}$	$28\frac{1}{2}$	$17\frac{1}{2}$	$13\frac{1}{2}$	$31\frac{1}{2}$			
FC & BI	18	18	$1\frac{1}{8}$	$1\frac{1}{8} \times 1$	$12\frac{1}{2}$	$15\frac{1}{2}$	$13\frac{1}{2}$	$17\frac{1}{2}$	$18\frac{1}{2}$	$24\frac{1}{2}$	19	$19\frac{1}{2}$	$2\frac{1}{2}$	$26\frac{1}{2}$	$7\frac{1}{2}$	$9\frac{1}{2}$	$13\frac{1}{2}$	$34\frac{1}{2}$	32	$19\frac{1}{2}$	$14\frac{1}{2}$	$34\frac{1}{2}$	$23\frac{1}{2}$	$19\frac{1}{2}$	$42\frac{1}{2}$			
FC & BI	21	21	$1\frac{1}{8}$	$1\frac{1}{8} \times 1$	$14\frac{1}{2}$	$18\frac{1}{2}$	$16\frac{1}{2}$	$20\frac{1}{2}$	$21\frac{1}{2}$	$28\frac{1}{2}$	22	$22\frac{1}{2}$	$3\frac{1}{2}$	$30\frac{1}{2}$	$8\frac{1}{2}$	$10\frac{1}{2}$	$15\frac{1}{2}$	$40\frac{1}{2}$	37	21	$16\frac{1}{2}$	$38\frac{1}{2}$	$25\frac{1}{2}$	21	$46\frac{1}{2}$			
FC & BI	24	24	$1\frac{1}{8}$	$1\frac{1}{8} \times 1$	$16\frac{1}{2}$	$20\frac{1}{2}$	$18\frac{1}{2}$	$23\frac{1}{2}$	$24\frac{1}{2}$	$35\frac{1}{2}$	26	$25\frac{1}{2}$	$3\frac{1}{2}$	$37\frac{1}{2}$	$10\frac{1}{2}$	$12\frac{1}{2}$	$19\frac{1}{2}$	$46\frac{1}{2}$	43	$25\frac{1}{2}$	$20\frac{1}{2}$	$46\frac{1}{2}$	$28\frac{1}{2}$	$23\frac{1}{2}$	$52\frac{1}{2}$			
FC & BI	27	27	$1\frac{1}{8}$	$1\frac{1}{8} \times 1$	$18\frac{1}{2}$	$23\frac{1}{2}$	$20\frac{1}{2}$	$26\frac{1}{2}$	$27\frac{1}{2}$	$39\frac{1}{2}$	29	$28\frac{1}{2}$	$3\frac{1}{2}$	$41\frac{1}{2}$	$11\frac{1}{2}$	$14\frac{1}{2}$	$21\frac{1}{2}$	$52\frac{1}{2}$	48	$29\frac{1}{2}$	$22\frac{1}{2}$	$51\frac{1}{2}$	31	$25\frac{1}{2}$	$56\frac{1}{2}$			
FC & BI	30	30	$1\frac{1}{8}$	$1\frac{1}{8} \times 1$	$20\frac{1}{2}$	$26\frac{1}{2}$	$22\frac{1}{2}$	$29\frac{1}{2}$	$30\frac{1}{2}$	$44\frac{1}{2}$	32	31	4	$46\frac{1}{2}$	$12\frac{1}{2}$	$15\frac{1}{2}$	$24\frac{1}{2}$	58	$53\frac{1}{2}$	$31\frac{1}{2}$	$24\frac{1}{2}$	$56\frac{1}{2}$	33	$27\frac{1}{2}$	$60\frac{1}{2}$			

* Diameter at bearing and for sheave bore

Note: All dimensions subject to change without notice Where exact dimensions are required write for certified drawings

ROUGHING-IN DIMENSIONS — ARRANGEMENT 3 — SIZES 33-89 SINGLE WIDTH SINGLE INLET — TOP HORIZONTAL DISCHARGE

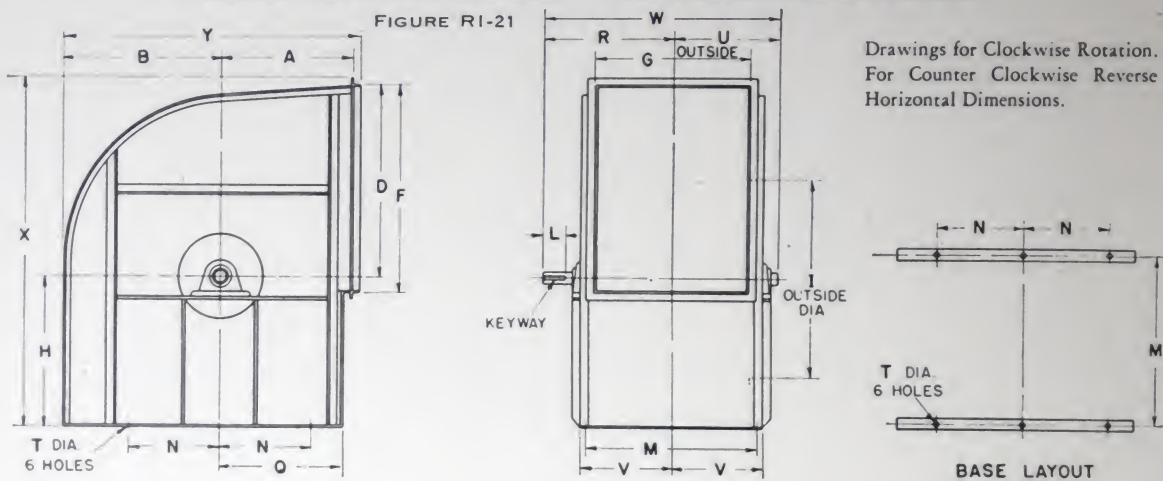


TABLE RI-21

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	B	D	F	G	H	I	L	M	N	Q	T	V	X	Y	BALL BEARING			OIL RING SLEEVE BEARING		
																				R	U	W	R	U	W
FC & BI	33	33	1 1/2	1/2 X 1/4	23	27 1/2	32 1/2	33 1/2	27	26 1/4	34	4	28 1/2	17	21	1/2	15 1/2	60 1/2	52	22 1/2	16 1/2	39	25 1/2	19 1/2	44 1/2
FC & BI	36	36	1 1/2	1/2 X 1/4	25	30 1/2	35 1/2	36 1/2	29	28 1/4	37	4	31 1/2	18	22 1/2	1/2	16 1/2	65	56 1/2	24	17 1/2	41 1/2	26 1/2	20 1/2	47
FC & BI	40	40 1/2	2 1/2	1/2 X 1/4	28	34 1/2	39 1/2	40 1/2	32 1/2	32 1/2	41 1/2	5	34 1/2	21	25 1/2	1/2	18 1/2	73 1/2	63 1/2	26 1/2	19 1/2	46	29 1/2	23 1/2	52 1/2
FC & BI	44	44 1/2	2 1/2	1/2 X 1/4	31	37 1/2	43 1/2	45	35 1/2	35 1/2	45 1/2	5	37 1/2	23	28 1/2	1/2	19 1/2	80 1/2	69 1/2	28 1/2	21 1/2	50 1/2	32	24 1/2	56 1/2
FC & BI	49	49	2 1/2	1/2 X 1/4	34 1/2	41 1/2	48 1/2	49 1/2	39 1/2	39	50	5	42 1/2	25	31 1/2	1/2	22 1/2	88 1/2	76 1/2	31 1/2	23 1/2	55	35 1/2	27 1/2	63
FC & BI	54	54	2 1/2	1/2 X 1/4	37	45 1/2	53 1/2	54 1/2	43 1/2	43	55	6	46 1/2	27	34 1/2	1/2	24 1/2	97 1/2	83 1/2	34 1/2	25 1/2	60	39 1/2	30 1/2	69 1/2
FC & BI	60	60	2 1/2	1/2 X 1/4	41 1/2	50 1/2	59 1/2	60 1/2	48	47 1/2	61	6	51 1/2	30	38 1/2	1/2	27	108 1/2	93 1/2	38 1/2	28 1/2	66 1/2	42 1/2	32 1/2	75
FC & BI	66	66	3 1/2	1/2 X 1/4	45 1/2	55 1/2	65 1/2	66 1/2	52 1/2	52	67	7	56 1/2	33	41 1/2	1/2	29 1/2	118 1/2	102 1/2	41 1/2	31 1/2	73	47 1/2	36 1/2	83 1/2

SINGLE WIDTH SINGLE INLET — UP-BLAST DISCHARGE

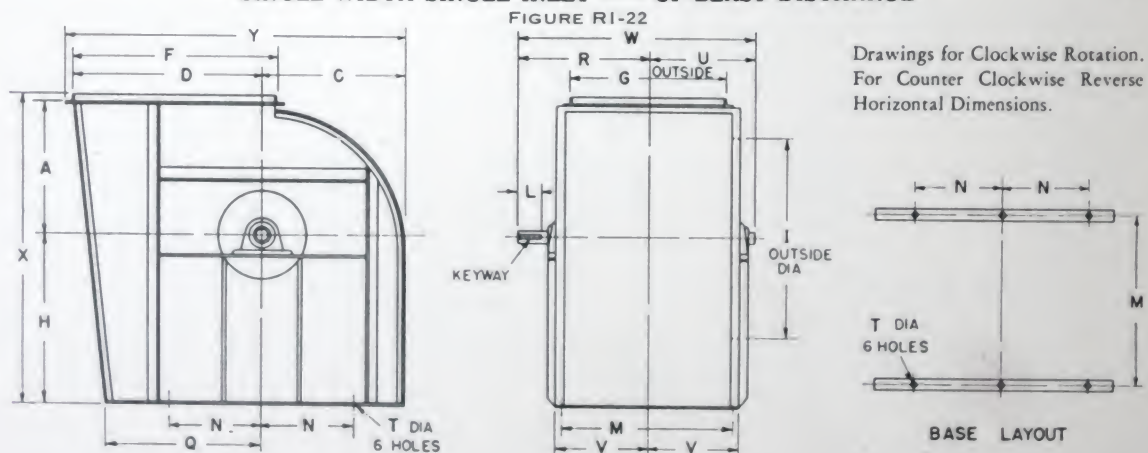


TABLE RI-22

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	A	C	D	F	G	H	I	L	M	N	Q	T	V	X	Y	BALL BEARING			OIL RING SLEEVE BEARING		
																				R	U	W	R	U	W
FC & BI	33	33	1 1/2	1/2 X 1/4	23	24 1/2	32 1/2	33 1/2	27	30	34	4	28 1/2	17	29 1/2	1/2	15 1/2	54 1/2	58 1/2	22 1/2	16 1/2	39	25 1/2	19 1/2	44 1/2
FC & BI	36	36	1 1/2	1/2 X 1/4	25	26 1/2	35 1/2	36 1/2	29	32	37	4	31 1/2	18	32 1/2	1/2	16 1/2	58 1/2	63 1/2	24	17 1/2	41 1/2	26 1/2	20 1/2	47
FC & BI	40	40 1/2	2 1/2	1/2 X 1/4	28	29 1/2	39 1/2	40 1/2	32 1/2	36 1/2	41 1/2	5	34 1/2	21	36 1/2	1/2	18 1/2	65 1/2	70 1/2	26 1/2	19 1/2	46	29 1/2	23 1/2	52 1/2
FC & BI	44	44 1/2	2 1/2	1/2 X 1/4	31	33 1/2	43 1/2	45	35 1/2	40	45 1/2	5	37 1/2	23	40 1/2	1/2	19 1/2	72 1/2	78	28 1/2	21 1/2	50 1/2	32	24 1/2	56 1/2
FC & BI	49	49	2 1/2	1/2 X 1/4	34 1/2	36 1/2	48 1/2	49 1/2	39 1/2	44	50	5	42 1/2	25	44 1/2	1/2	22 1/2	79 1/2	85 1/2	31 1/2	23 1/2	55	35 1/2	27 1/2	63
FC & BI	54	54	2 1/2	1/2 X 1/4	37	40 1/2	53 1/2	54 1/2	43 1/2	48 1/2	55	6	46 1/2	27	48 1/2	1/2	24 1/2	86 1/2	94 1/2	34 1/2	25 1/2	60	39 1/2	30 1/2	69 1/2
FC & BI	60	60	2 1/2	1/2 X 1/4	41 1/2	44 1/2	59 1/2	60 1/2	48	54	61	6	51 1/2	30	54 1/2	1/2	27	96 1/2	105 1/2	38 1/2	28 1/2	66 1/2	42 1/2	32 1/2	75
FC & BI	66	66	3 1/2	1/2 X 1/4	45 1/2	48 1/2	65 1/2	66 1/2	52 1/2	59	67	7	56 1/2	33	59 1/2	1/2	29 1/2	105 1/2	115 1/2	41 1/2	31 1/2	73	47 1/2	36 1/2	83 1/2

Note: All dimensions subject to change without notice. Where exact dimensions are required write for certified drawings.

ROUGHING-IN DIMENSIONS — ARRANGEMENT 3 — SIZES 33-89 SINGLE WIDTH SINGLE INLET — BOTTOM HORIZONTAL DISCHARGE

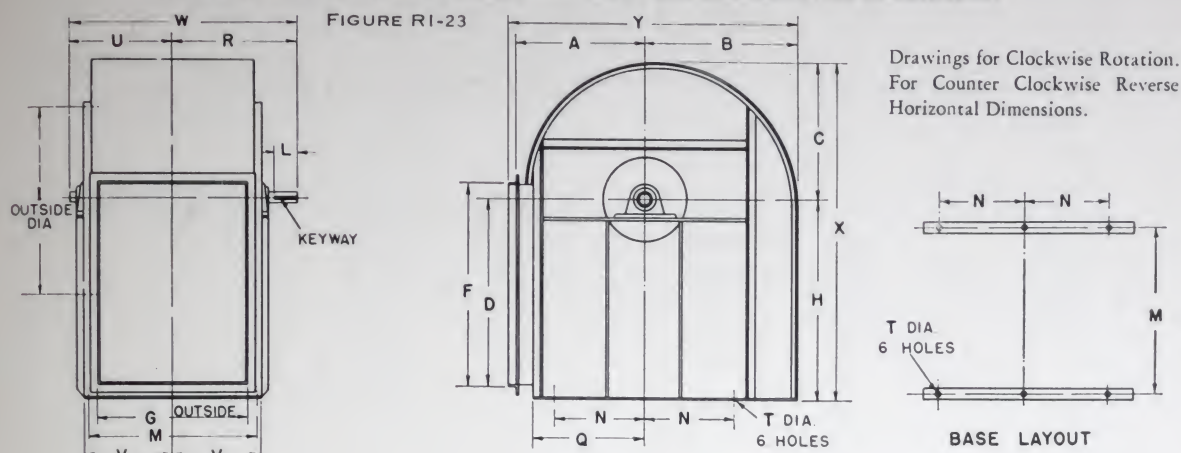


TABLE RI-23

FAN TYPE	FAN SIZE	WHEEL SIZE	SHAFT DIAM.	KEY WAY	A	B	C	D	F	G	H	I	L	M	N	Q	T	V	X	Y	BALL BEARING			OIL RING SLEEVE BEARING		
																					R	U	W	R	U	W
FC & BI	33	33	1 1/8	1/2 X 1/4	23	27 3/8	24 1/8	32 1/8	33 1/8	27	34 3/8	34	4	28 3/8	17	19 1/8	15 1/8	59 1/8	52	22 1/8	16 1/8	39	25 1/8	19 3/8	44 1/8	47
FC & BI	36	36	1 1/8	1/2 X 1/4	25	30 3/8	26 1/8	35 3/8	36 3/8	29	37 3/8	37	4	31 3/8	18	21 1/8	16 1/8	64 1/8	56 1/8	24	17 1/8	41 1/8	26 3/8	20 3/8	47	47
FC & BI	40	40 1/2	2 1/8	1/2 X 1/4	28	34 3/8	29 1/8	39 3/8	40 3/8	32 3/8	42 1/8	41 1/8	5	34 3/8	21	24 1/8	18 1/8	72 1/8	63 1/8	26 3/8	19 1/8	46	29 1/8	23 1/8	52 1/8	52 1/8
FC & BI	44	44 1/2	2 1/8	1/2 X 1/4	31	37 1/8	33 1/8	43 3/8	45 1/8	35 3/8	46 3/8	45 1/8	5	37 3/8	23	26 1/8	19 1/8	79 1/8	69 1/8	28 3/8	21 1/8	50 1/8	32	24 3/8	56 1/8	56 1/8
FC & BI	49	49	2 1/8	3/4 X 1/4	34 1/8	41 1/8	36 1/8	48 3/8	49 3/8	39 3/8	51	50	5	42 3/8	25	28 1/8	22 1/8	87 1/8	76 3/8	31 3/8	23 3/8	55	35 3/8	27 3/8	63	63
FC & BI	54	54	2 1/8	3/4 X 1/4	37	45 3/8	40 3/8	53 3/8	54 3/8	43 3/8	56 3/8	55	6	46 3/8	27	31 1/8	24 3/8	96 3/8	83 3/8	34 3/8	25 3/8	60	39 3/8	30 3/8	69 3/8	69 3/8
FC & BI	60	60	2 1/8	3/4 X 1/4	41 1/8	50 3/8	44 3/8	59 3/8	60 3/8	48	62 3/8	61	6	51 3/8	30	34 3/8	27	106 3/8	93 3/8	38 3/8	28 3/8	66 3/8	42 3/8	32 3/8	75	75
FC & BI	66	66	3 1/8	3/4 X 1/4	45 1/8	55 3/8	48 3/8	65 3/8	66 3/8	52 3/8	68 3/8	67	7	56 3/8	33	37 3/8	29 3/8	117 3/8	102 3/8	41 3/8	31 3/8	73	47 3/8	36 3/8	83 3/8	83 3/8

SINGLE WIDTH SINGLE INLET — DOWN-BLAST DISCHARGE

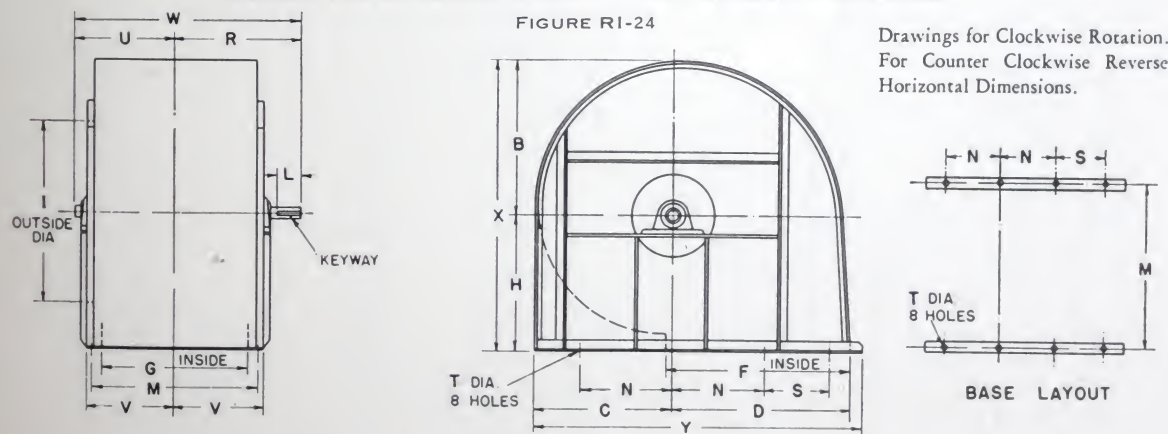


TABLE RI-24

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.	KEY WAY	B	C	D	F	G	H	I	L	M	N	S	T	V	X	Y	BALL BEARING			OIL RING SLEEVE BEARING		
																				R	U	W	R	U	W
FC & BI	33	33	1 1/8	1/2 X 1/4	27 3/8	24 1/8	32 1/8	33 1/8	26 3/8	24 1/8	34	4	30 3/8	17 1/8	13	16 3/8	52 3/8	59 1/8	22 1/8	16 1/8	39	25 1/8	19 3/8	44 1/8	44 1/8
FC & BI	36	36	1 1/8	1/2 X 1/4	30 3/8	26 1/8	35 3/8	36 3/8	28 3/8	26 3/8	37	4	32 3/8	18 1/8	14	17 3/8	56 3/8	64 1/8	24 1/8	17 1/8	41 1/8	26 3/8	20 3/8	47 1/8	47 1/8
FC & BI	40	40 1/2	2 1/8	1/2 X 1/4	34 1/8	29 1/8	39 3/8	40 3/8	32 3/8	28 3/8	41 1/8	5	36 3/8	21 1/8	14	19 1/8	62 3/8	72 1/8	26 3/8	19 1/8	46	29 1/8	23 1/8	52 1/8	52 1/8
FC & BI	44	44 1/2	2 1/8	1/2 X 1/4	37 1/8	33 1/8	43 3/8	44 3/8	35 3/8	32 1/8	45 3/8	5	39 3/8	23 1/8	15	20 3/8	69 1/8	79 1/8	28 3/8	21 1/8	50 1/8	32 1/8	24 3/8	56 1/8	56 1/8
FC & BI	49	49	2 1/8	3/8 X 1/8	41 1/8	36 1/8	48 3/8	49 3/8	39 3/8	34 3/8	50	5	43 3/8	25 1/8	16	22 3/8	76 3/8	87 1/8	31 3/8	23 3/8	55	35 3/8	27 3/8	63 1/8	63 1/8
FC & BI	54	54	2 1/8	3/8 X 1/8	45 3/8	40 3/8	53 3/8	54 3/8	43 3/8	37 3/8	55	6	47 3/8	27 1/8	18	25 3/8	83 3/8	95 3/8	34 3/8	25 3/8	60	39 3/8	30 3/8	69 3/8	69 3/8
FC & BI	60	60	2 1/8	3/4 X 3/8	50 3/8	44 3/8	59 3/8	60 3/8	47 3/8	42 3/8	61	6	52 3/8	30 3/8	22	27 3/8	93 3/8	106 3/8	38 3/8	28 3/8	66 3/8	42 3/8	32 3/8	75 1/8	75 1/8
FC & BI	66	66	3 1/8	3/4 X 3/8	55 3/8	48 3/8	65 3/8	66 3/8	52 3/8	46 3/8	67	7	57 3/8	33 3/8	27	29 3/8	101 3/8	116 3/8	41 3/8	31 3/8	73	47 3/8	36 3/8	83 3/8	83 3/8

NOTE: All dimensions subject to change without notice. Where exact dimensions are required, write for certified drawings.

ROUGHING-IN DIMENSIONS — ARRANGEMENT 3 — SIZES 33-89

DOUBLE WIDTH DOUBLE INLET — TOP HORIZONTAL DISCHARGE

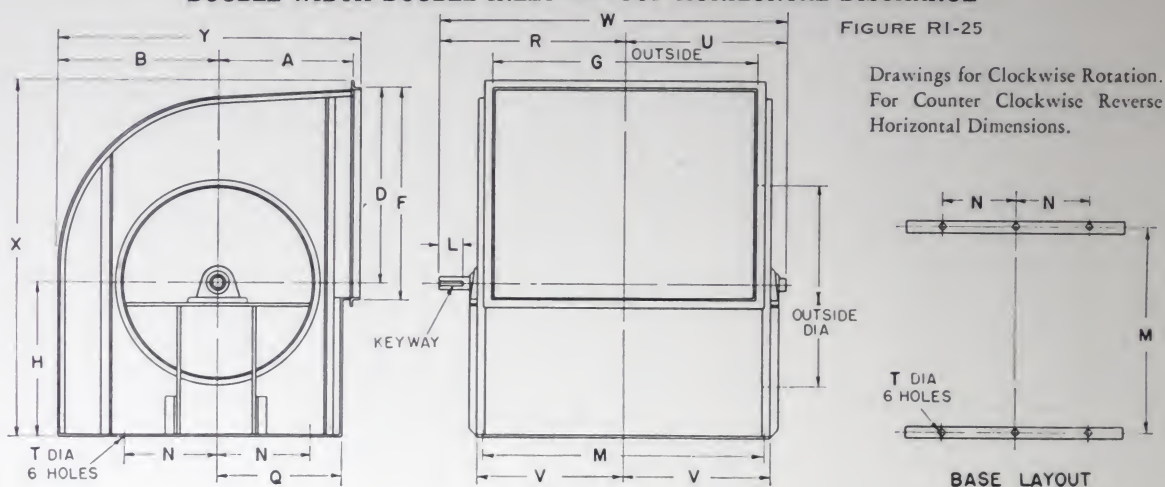


TABLE RI-25

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.*	KEY WAY	A	B	D	F	G	H	I	L	M	N	Q	T	V	X	Y	BALL BEARING			OIL RING SLEEVE BEARING		
																				R	U	W	R	U	W
FC & BI	33	33	1 1/8	1/2 X 3/4	23	27 1/2	32 1/2	33 1/8	48 1/2	26 1/4	34	4	49 1/2	17	21	25 1/4	60 1/2	52	35 1/2	27 1/2	63	38 3/8	30 1/2	68 1/2	
FC & BI	36	36	1 1/8	1/2 X 3/4	25	30 3/8	35 3/8	36 1/8	52 1/2	28 1/4	37	4	54 1/2	18	22 1/2	28 1/2	65	56 3/8	39 1/2	29 3/8	68 1/2	41 1/2	32 1/2	74	
FC & BI	40	40 1/2	2 1/8	1/2 X 3/4	28	34 1/2	39 1/2	40 1/2	59	32 1/4	41 1/2	5	61	21	25 1/2	31 3/4	73 3/4	63 1/2	43	33	76	46 1/2	36 1/2	82 1/2	
FC & BI	44	44 1/2	2 1/8	1/2 X 3/4	31	37 1/2	43 1/2	45	65	35 1/2	45 1/2	5	67	23	28 1/2	34 1/2	80 1/2	69 1/2	47	36	83	50 1/2	39 1/2	89 1/2	
FC & BI	49	49	2 1/8	3/4 X 3/4	34 1/2	41 1/2	48 1/2	49 1/2	71 1/2	39	50	5	74 1/2	25	31 1/2	38 1/2	88 1/2	76 1/2	51 1/2	39 1/2	91	55 1/2	43 3/4	99	
FC & BI	54	54	2 1/8	3/4 X 3/4	37 1/2	45 1/2	53 1/2	54 1/2	79	43	55	6	82 1/2	27	34 1/2	42 1/2	97 3/4	83 3/4	55 1/2	43 1/2	99	60 1/2	48	108 1/2	
FC & BI	60	60	2 1/8	3/4 X 3/4	41 1/2	50 1/2	59 1/2	60 1/2	87 1/2	47 1/2	61	6	91	30	38 1/2	46 1/2	108 1/2	93 3/4	61	48	109	65 1/2	52 1/2	117 1/2	
FC & BI	66	66	3 1/8	3/4 X 3/4	45 1/2	55 1/2	65 1/2	66 1/2	96 1/2	52	67	7	99 1/2	33	41 1/2	51 1/2	118 1/2	102 1/2	66 1/2	52 1/2	119	71 1/2	58 1/2	129 1/2	

DOUBLE WIDTH DOUBLE INLET — UP-BLAST DISCHARGE

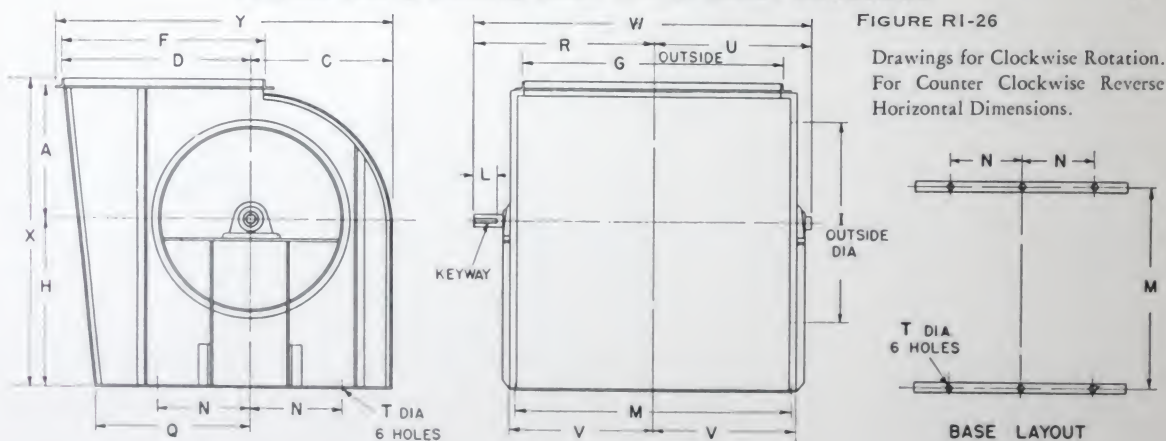


TABLE RI-26

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM. *	KEY WAY	A	C	D	F	G	H	I	L	M	N	Q	T	V	X	Y	BALL BEARING			OIL RING SLEEVE BEARING		
																				R	U	W	R	U	W
FC & BI	33	33	1 1/8	1/2 X 3/4	23	24 1/2	32 1/2	33 1/2	48 1/2	30	34	4	49 1/2	17	29 1/2	25 1/4	54 1/2	58 1/2	35 1/2	27 1/2	63	38 1/2	30 1/2	68 1/2	
FC & BI	36	36	1 1/8	1/2 X 3/4	25	26 1/2	35 1/2	36 1/2	52 1/2	32	37	4	54 1/2	18	32 1/2	28 1/2	58 1/2	63 1/2	39 1/2	29 1/2	68 1/2	41 1/2	32 1/2	74	
FC & BI	40	40 1/2	2 1/8	1/2 X 3/4	28	29 1/2	39 1/2	40 1/2	59	36 1/2	41 1/2	5	61	21	36 1/2	31 1/2	65 1/2	70 1/2	43	33	76	46 1/2	36 1/2	82 1/2	
FC & BI	44	44 1/2	2 1/8	1/2 X 3/4	31	33	43 1/2	45	65	40	45 1/2	5	67	23	40 1/2	34 1/2	72 1/2	78	47	36	83	50 1/2	39 1/2	89 1/2	
FC & BI	49	49	2 1/8	3/4 X 3/4	34 1/2	36 1/2	48 1/2	49 1/2	71 1/2	44	50	5	74 1/2	25	44 1/2	38 1/2	79 1/2	85 1/2	51 1/2	39 1/2	91	55 1/2	43 1/2	99	
FC & BI	54	54	2 1/8	3/4 X 3/4	37 1/2	40 1/2	53 1/2	54 1/2	79	48 1/2	55	6	82 1/2	27	48 1/2	42 1/2	86 1/2	94 1/2	55 1/2	43 1/2	99	60 1/2	48	108 1/2	
FC & BI	60	60	2 1/8	3/4 X 3/4	41 1/2	44 1/2	59 1/2	60 1/2	87 1/2	54	61	6	91	30	54 1/2	46 1/2	96 1/2	105 1/2	61	48	109	65 1/2	52 1/2	117 1/2	
FC & BI	66	66	3 1/8	3/4 X 3/4	45 1/2	48 1/2	65 1/2	66 1/2	96 1/2	59	67	7	99 1/2	33	59 1/2	51 1/2	105 1/2	115 1/2	66 1/2	52 1/2	119	71 1/2	58 1/2	129 1/2	

* Diameter at bearing and for sheave bore.

NOTE: All dimensions subject to change without notice. Where exact dimensions are required write for certified drawings.

ROUGHING-IN DIMENSIONS — ARRANGEMENT 3 — SIZES 33-89
DOUBLE WIDTH DOUBLE INLET — BOTTOM HORIZONTAL DISCHARGE

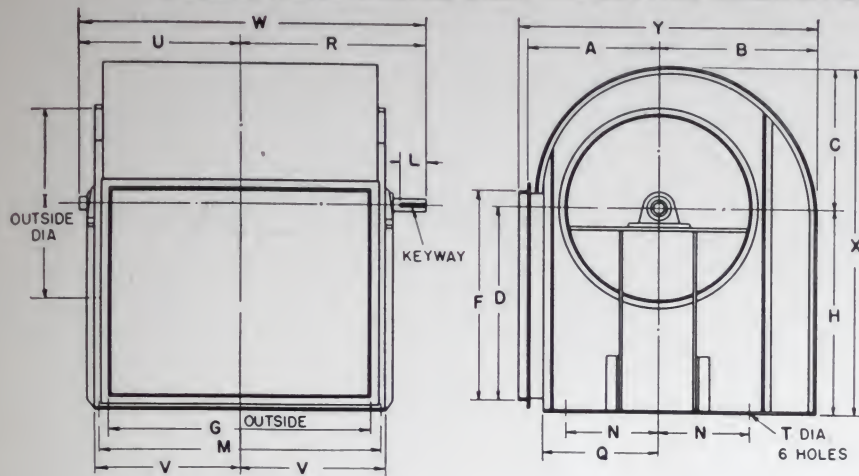


FIGURE RI-27

Drawings for Clockwise Rotation.
 For Counter Clockwise Reverse
 Horizontal Dimensions.

TABLE RI-27

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.*	KEY WAY	A	B	C	D	F	G	H	I	L	M	N	Q	T	V	X	Y	BALL BEARING			OIL RING SLEEVE BEARING		
																					R	U	W	R	U	W
FC & BI	33	33	1 1/4	1/2 X 1/2	23	27 1/2	24 1/4	32 1/2	33 1/4	48 1/4	34 1/4	34	4	49 1/2	17	19 1/2	16 1/2	25 1/2	59 1/2	52	35 1/2	27 1/2	63	38 1/4	30 1/4	68 1/2
FC & BI	36	36	1 1/2	1/2 X 1/2	25	30 1/2	26 1/2	35 1/2	36 1/2	52 1/2	37 1/2	37	4	54 1/2	18	21 1/2	18 1/2	28 1/2	64 1/2	56 1/2	39 1/2	29 1/2	68 1/2	41 1/2	32 1/2	74
FC & BI	40	40 1/2	2 1/4	1/2 X 1/2	28	34 1/2	29 1/2	39 1/2	40 1/2	59	42 1/2	41 1/2	5	61	21	24 1/2	31 1/2	72 1/2	63 1/2	43	33	76	46 1/2	36 1/2	82 1/2	
FC & BI	44	44 1/2	2 1/2	1/2 X 1/2	31	37 1/2	33	43 1/2	45	65	46 1/2	45 1/2	5	67	23	26 1/2	34 1/2	79 1/2	69 1/2	47	36	83	50 1/2	39 1/2	89 1/2	
FC & BI	49	49	2 3/4	3/4 X 1/2	34 1/2	41 1/2	36 1/2	48 1/2	49 1/2	71 1/2	51	50	5	74 1/2	25	28 1/2	38 1/2	87 1/2	76 1/2	51 1/2	39 1/2	91	55 1/2	43 1/2	99	
FC & BI	54	54	2 1/2	3/4 X 1/2	37	45 1/2	40 1/2	53 1/2	54 1/2	79	56 1/2	55	6	82 1/2	27	31 1/2	42 1/2	96 1/2	83 1/2	55 1/2	43 1/2	99	60 1/2	48	108 1/2	
FC & BI	60	60	2 1/2	3/4 X 1/2	41 1/2	50 1/2	44 1/2	59 1/2	60 1/2	87 1/2	62 1/2	61	6	91	30	34 1/2	46 1/2	106 1/2	93 1/2	61	48	109	65 1/2	52 1/2	117 1/2	
FC & BI	66	66	3 1/4	1 X 1/2	45 1/2	55 1/2	48 1/2	65 1/2	66 1/2	96 1/2	68 1/2	67	7	100 1/2	33	37 1/2	51 1/2	117 1/2	102 1/2	66 1/2	52 1/2	119	71 1/2	58 1/2	129 1/2	

DOUBLE WIDTH DOUBLE INLET — DOWN-BLAST DISCHARGE

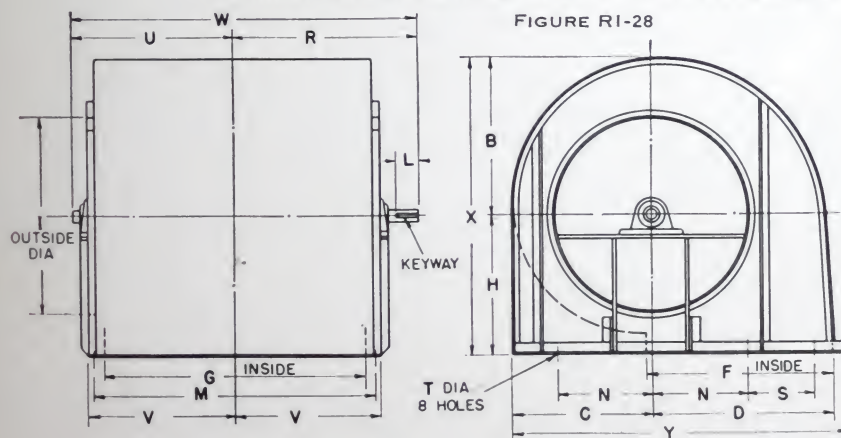


FIGURE RI-28

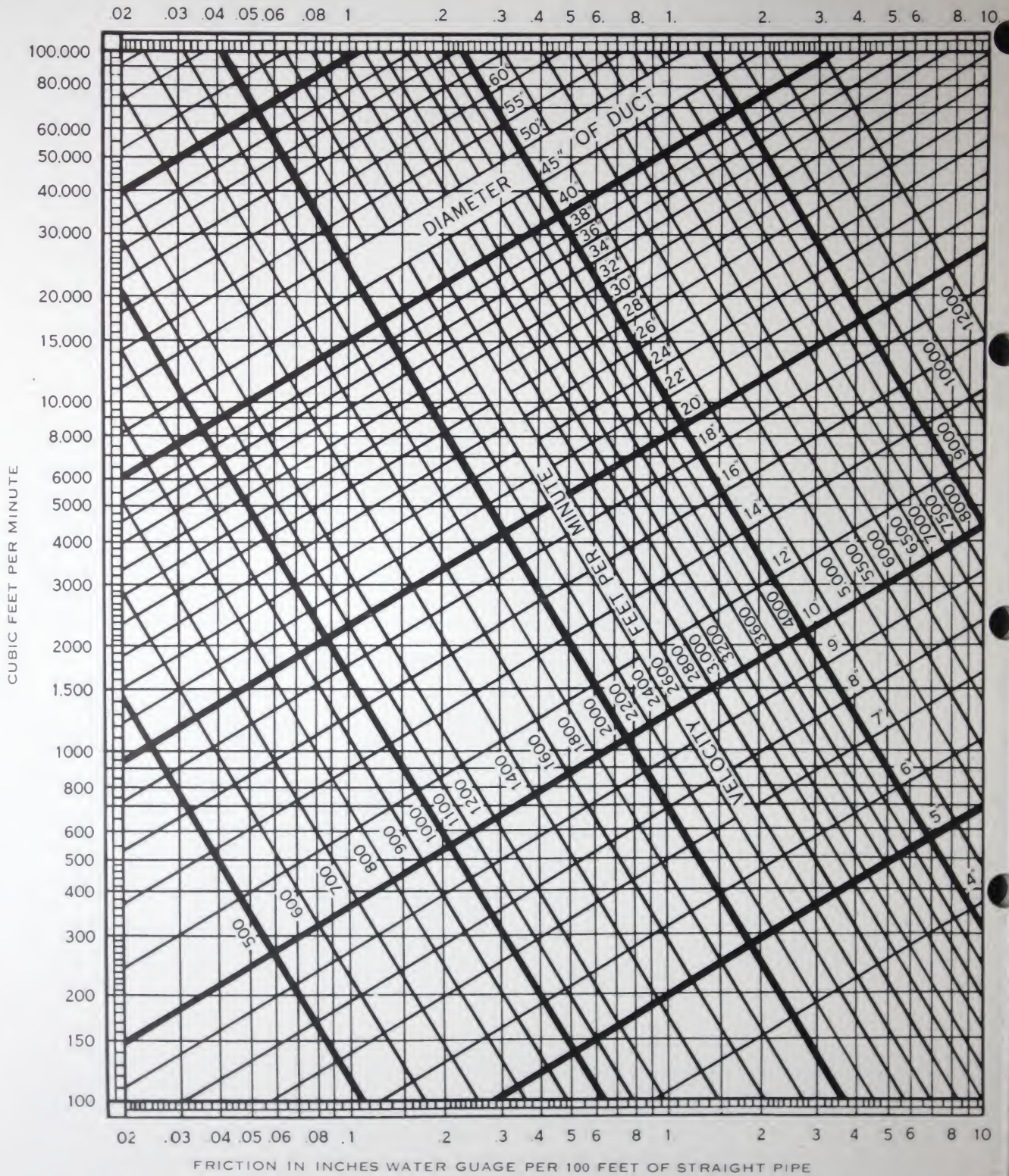
Drawings for Clockwise Rotation.
 For Counter Clockwise Reverse
 Horizontal Dimensions.

TABLE RI-28

FAN TYPE	FAN SIZE	WHEEL DIAM.	SHAFT DIAM.*	KEY WAY	B	C	D	F	G	H	I	L	M	N	S	T	V	X	Y	BALL BEARING			OIL RING SLEEVE BEARING		
																				R	U	W	R	U	W
FC & BI	33	33	1 1/4	1/2 X 1/2	27 1/2	24 1/4	32 1/4	33 1/4	48 1/4	24 1/4	34	4	52 1/2	17	13	16 1/2	27 1/2	52 1/2	59 1/2	35 1/2	27 1/2	63	38 1/4	30 1/4	68 1/2
FC & BI	36	36	1 1/2	1/2 X 1/2	30 1/2	26 1/2	35 1/2	36 1/2	52 1/2	26	37	4	56 1/2	18	14	18 1/2	29 1/2	56 1/2	64 1/2	39 1/2	29 1/2	68 1/2	41 1/2	32 1/2	74
FC & BI	40	40 1/2	2 1/4	1/2 X 1/2	34 1/2	29 1/2	39 1/2	40 1/2	58 1/2	28 1/2	41 1/2	5	62 1/2	21	14	16 1/2	32 1/2	62 1/2	72 1/2	43	33	76	46 1/2	36 1/2	82 1/2
FC & BI	44	44 1/2	2 1/2	1/2 X 1/2	37 1/2	33	43 1/2	44 1/2	64 1/2	32	45 1/2	5	68 1/2	23	15	18 1/2	35 1/2	69 1/2	79 1/2	47	36	83	50 1/2	39 1/2	89 1/2
FC & BI	49	49	2 3/4	3/4 X 1/2	41 1/2	36 1/2	48 1/2	49 1/2	71 1/2	34 1/2	50	5	75 1/2	25	16	18 1/2	38 1/2	76 1/2	87 1/2	51 1/2	39 1/2	91	55 1/2	43 1/2	99
FC & BI	54	54	2 1/2	3/4 X 1/2	45 1/2	40 1/2	53 1/2	54 1/2	78 1/2	37 1/2	55	6	83 1/2	27	18	18 1/2	42 1/2	83 1/2	95 1/2	55 1/2	43 1/2	99	60 1/2	48	108 1/2
FC & BI	60	60	2 1/2	3/4 X 1/2	50 1/2	44 1/2	59 1/2	60 1/2	87 1/2	42 1/2	61	6	91 1/2	30	22	18 1/2	47 1/2	93	106 1/2	61	48	109	65 1/2	52 1/2	117 1/2
FC & BI	66	66	3 1/4	1 X 1/2	55 1/2	48 1/2	65 1/2	66 1/2	95 1/2	46	67	7	100 1/2	33	27	18 1/2	51 1/2	101 1/2	116 1/2	66 1/2	52 1/2	119	71 1/2	58 1/2	129 1/2

* Diameter at bearing and for sheave bore.

NOTE: All dimensions subject to change without notice. Where exact dimensions are required write for certified drawings.



FRICTION CHART FOR CIRCULAR DUCTS

FIGURE 37

TABLE 64 — CIRCULAR EQUIVALENTS OF RECTANGULAR DUCTS FOR EQUAL FRICTION

From Chapter 30 Heating Ventilating Air Conditioning Guide 1940

SIDE RECTAN. DUCT	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	24	26	28	30	32	34	36	38	40	42	44	46	48
8	6.1	6.9	7.6	8.2	8.8																											
9	6.5	7.3	8.0	8.7	9.3	9.9																										
10	6.8	7.7	8.4	9.2	9.8	10.4	11.0																									
11	7.1	8.0	8.8	9.6	10.2	10.9	11.5	12.1																								
12	7.4	8.3	9.2	10.0	10.7	11.4	12.0	12.6	13.2																							
13	7.6	8.7	9.6	10.4	11.1	11.8	12.5	13.1	13.7	14.3																						
14	7.9	8.9	9.9	10.8	11.5	12.3	12.9	13.6	14.3	14.9	15.4																					
15	8.2	9.2	10.2	11.1	11.9	12.7	13.4	14.1	14.7	15.3	16.0	16.5																				
16	8.4	9.5	10.5	11.4	12.3	13.1	13.8	14.5	15.2	15.8	16.5	17.1	17.6																			
17	8.6	9.8	10.8	11.8	12.6	13.5	14.2	15.0	15.7	16.3	17.0	17.6	18.2	18.7																		
18	8.9	10.0	11.1	12.1	13.0	13.8	14.6	15.4	16.1	16.8	17.4	18.1	18.7	19.2	19.8																	
19	9.1	10.3	11.4	12.4	13.3	14.2	15.0	15.8	16.5	17.2	17.9	18.6	19.2	19.8	20.4	20.9																
20	9.3	10.5	11.6	12.7	13.6	14.5	15.4	16.2	17.0	17.6	18.4	19.0	19.7	20.3	20.9	21.5	22.0															
22	9.7	11.0	12.1	13.2	14.2	15.2	16.1	16.9	17.8	18.5	19.2	19.9	20.6	21.3	21.9	22.5	23.1	23.6	24.2													
24	10.0	11.4	12.6	13.8	14.8	15.8	16.8	17.6	18.5	19.3	20.0	20.8	21.5	22.2	22.8	23.5	24.0	24.7	25.2	26.4												
26	10.4	11.8	13.1	14.3	15.4	16.4	17.3	18.3	19.2	20.0	20.8	21.6	22.3	23.0	23.8	24.4	25.1	25.7	26.3	27.5	28.6											
28	10.8	12.2	13.5	14.8	15.9	17.0	18.0	19.0	19.8	20.7	21.5	22.4	23.1	23.9	24.6	25.3	26.0	26.6	27.3	28.5	29.7	30.8										
30	11.0	12.6	13.9	15.2	16.4	17.5	18.5	19.5	20.5	21.4	22.2	23.1	23.9	24.7	25.4	26.2	26.8	27.5	28.2	29.5	30.7	31.9	33.0									
32	11.3	12.9	14.3	15.6	16.9	18.0	19.1	20.1	21.1	22.0	22.9	23.8	24.6	25.4	26.2	27.0	27.7	28.4	29.1	30.5	31.7	32.9	34.1	35.2								
34	11.6	13.2	14.7	16.1	17.3	18.5	19.6	20.7	21.6	22.6	23.5	24.4	25.3	26.2	26.9	27.7	28.5	29.2	30.0	31.3	32.7	33.9	35.1	36.3	37.4							
36	11.9	13.6	15.1	16.4	17.7	19.0	20.1	21.2	22.2	23.2	24.2	25.1	26.0	26.8	27.7	28.5	29.3	30.0	30.8	32.2	33.7	34.9	36.1	37.3	38.5	39.6						
38	12.2	13.9	15.4	16.8	18.2	19.4	20.6	21.7	22.8	23.8	24.8	25.8	26.7	27.5	28.4	29.2	30.0	30.8	31.5	33.1	34.6	35.9	37.1	38.4	39.5	40.7	41.8					
40	12.5	14.3	15.7	17.2	18.6	19.8	21.1	22.2	23.3	24.4	25.4	26.4	27.3	28.2	29.1	29.9	30.8	31.6	32.4	33.9	35.3	36.7	38.0	39.3	40.5	41.7	42.9	44.0				
42	12.7	14.5	16.1	17.6	19.0	20.3	21.6	22.7	23.8	24.9	25.9	26.9	27.9	28.8	29.8	30.7	31.4	32.2	33.0	34.5	36.0	37.6	39.0	40.3	41.5	42.7	44.0	45.1	46.2			
44	13.0	14.8	16.4	18.0	19.4	20.7	22.0	23.1	24.3	25.4	26.5	27.5	28.5	29.5	30.3	31.2	32.1	32.9	33.7	35.3	36.9	38.5	39.9	41.2	42.5	43.7	44.9	46.1	47.2	48.4		
46	13.3	15.1	16.7	18.4	19.8	21.1	22.4	23.6	24.8	25.9	27.0	28.1	29.1	30.1	31.0	31.9	32.8	33.8	34.6	36.2	37.8	39.3	40.8	42.2	43.5	44.8	46.0	47.2	48.4	49.5	50.6	
48	13.5	15.4	17.0	18.7	20.1	21.5	22.8	24.1	25.2	26.4	27.5	28.6	29.6	30.5	31.6	32.5	33.4	34.3	35.2	37.0	38.5	40.0	41.5	43.0	44.4	45.6	46.9	48.1	49.3	50.5	51.6	52.8
50	13.7	15.7	17.3	19.0	20.4	21.9	23.2	24.5	25.7	26.9	28.0	29.2	30.3	31.3	32.2	33.1	34.1	35.0	35.9	37.6	39.2	40.8	42.3	43.8	45.2	46.5	47.9	49.1	50.4	51.6	52.9	54.0
52	13.9	15.9	17.6	19.2	20.8	22.2	23.6	24.9	26.2	27.4	28.5	29.6	30.7	31.8	32.9	33.8	34.7	35.6	36.5	38.3	40.0	41.6	43.1	44.7	46.1	47.5	48.9	50.1	51.3	52.5	53.8	55.0
54	14.1	16.1	17.9	19.6	21.1	22.6	24.0	25.3	26.6	27.8	29.0	30.1	31.2	32.3	33.4	34.4	35.3	36.3	37.2	38.9	40.7	42.4	44.0	45.5	47.0	48.4	49.9	51.1	52.3	53.5	54.8	56.0
56	14.3	16.3	18.2	19.9	21.5	22.9	24.4	25.7	27.0	28.3	29.5	30.6	31.7	32.8	33.9	34.9	35.9	36.9	37.8	39.6	41.3	43.0	44.6	46.2	47.7	49.1	50.6	52.0	53.3	54.6	55.9	57.0
58	14.6	16.6	18.4	20.2	21.8	23.3	24.7	26.1	27.4	28.7	30.0	31.1	32.2	33.3	34.4	35.4	36.4	37.4	38.4	40.3	42.1	43.8	45.4	47.0	48.5	50.0	51.5	52.9	54.2	55.5	56.8	58.0
60	14.7	16.8	18.7	20.4	22.1	23.6	25.1	26.5	27.8	29.1	30.5	31.6	32.7	33.8	34.9	36.1	37.1	38.1	39.1	40.9	42.7	44.5	46.1	47.8	49.3	50.9	52.3	53.8	55.0	56.4	57.7	58.9
62	15.0	17.0	19.0	20.7	22.4	24.0	25.5	26.9	28.2	29.5	30.9	32.1	33.2	34.3	35.4	36.6	37.7	38.7	39.6	41.6	43.4	45.1	46.8	48.4	50.0	51.7	53.0	54.5	55.9	57.2	58.5	59.7
64	15.1	17.3	19.2	21.0	22.7	24.3	25.9	27.3	28.6	29.9	31.3	32.6	33.7	34.8	35.9	37.1	38.2	39.2	40.2	42.2	44.0	45.8	47.5	49.2	50.9	52.4	53.9	55.4	56.8	58.1	59.4	60.6
66	15.3	17.5	19.5	21.2	23.0	24.6	26.2	27.7	29.0	30.3	31.7	33.0	34.2	35.3	36.4	37.6	38.7	39.8	40.8	42.8	44.7	46.5	48.2	50.0	51.6	53.1	54.7	56.2	57.6	59.1	60.4	61.6
68																																
70																																
72																																

ADDITIONAL SIZES: To find circular equivalents for smaller rectangular ducts than shown in table. Rule — Twice the sides of the rectangular duct is equivalent to twice the diameter of the round duct.

EXAMPLE: Require the equivalent of a duct 12" x 3 1/2" — SOLUTION: 24" x 7" = 13.8" round. (From Table) Then a 12" x 3 1/2" = 6.9" round.

NOTES ON DUCT CONSTRUCTION

Ducts should be rigidly made and sturdily supported.

Sharp elbows and bends are to be avoided whenever possible. When they cannot be avoided, it is advisable to install turning vanes or splitters in the duct. Square throat elbows are not recommended unless turning vanes are used, too. The radius of the throat should be kept substantially the same as the duct diameter. When calculating the friction of a duct, it is necessary to allow an equivalent length of ten diameters of straight duct for every 90° elbow.

In order to realize full recovery of velocity pressure at outlet of FC Fans, it is important to keep the discharge duct reasonably straight for a short distance from the fan outlet before making any abrupt change in area or direction. One or one and a half diameters in length is usually sufficient.

When changes in duct area are necessary, it is desirable that the transformation pieces be made as long as possible. The angle between the sides and axis of the duct should

never exceed 30° and more satisfactory operation will be obtained if this angle is held to 15° or less.

It is desirable to maintain a true cross-section with the air flow as unrestricted as possible in transformations and elbows.

Circular ducts create the least possible resistance to air flow. Square ducts are next to circular as far as resistance is concerned and are preferred over rectangular ducts. When it is necessary to use rectangular ducts, it is desirable to hold the sides as close to equal as possible. Good practice limits the ratio of the short side of the duct to the long side to 1 to 3 and a ratio greater than 1 to 4 should be avoided.

Sheet metal ducts will create less resistance than ducts made of other materials. Where other rougher material is used, allowance must be made for the increased resistance.

Where inlet boxes are used, the side opposite the fan inlet should be kept at least 60% of the fan diameter distant from the fan side.

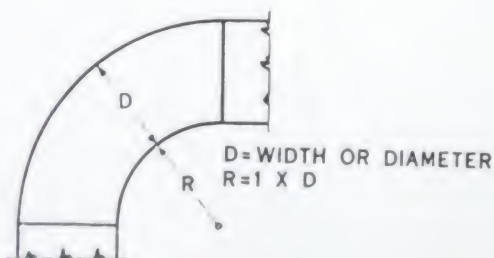


FIGURE 38
90° Elbow

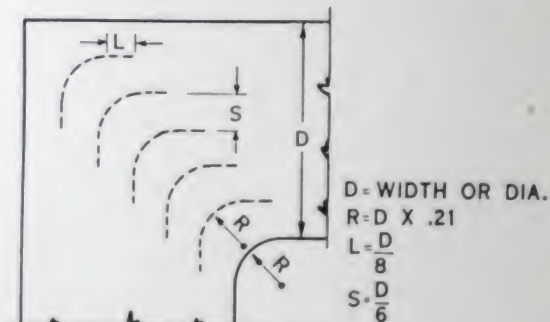


FIGURE 39
90° Duct Turn

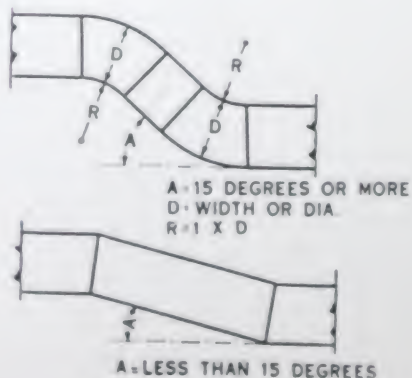


FIGURE 40
Duct Offsets

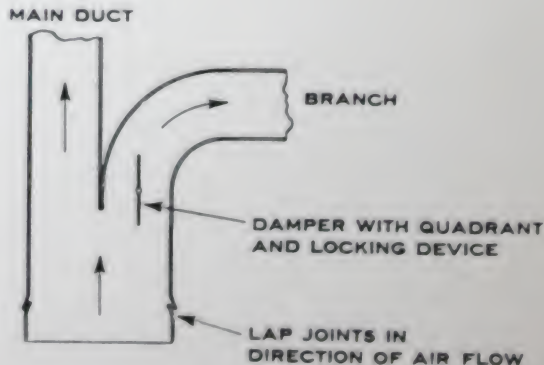


FIGURE 41
Branch Duct Arrangement

BASIC FAN LAWS

Both the application engineer and the installation contractor encounter many problems which must be solved in the field. Practically all of these problems can be solved with a minimum of effort by proper application of the fan laws given below.

Problems regarding application and installation of ventilating units can be solved by using the first six laws. The balance of the laws are useful in designing fans, checking ratings and establishing fan tables.

The first three laws are used to determine speed and power requirements of a fan when it is necessary to increase or decrease the air volume. If the present air volume and

power is known, the proper fan speed and motor horsepower for the new condition can easily be calculated by means of Fan Laws 1, 2 and 3.

The second three laws when used in connection with the chart of Air Density Ratios shown in Figure 33, page 13, assure the correct fan selection wherever air density other than standard is encountered.

Equipped with a working knowledge of these six fan laws, the field man is able to analyze fan applications more accurately, to convert present fan installations to new conditions or service existing installations to perform effectively.

When a fan is operated on a given system the following relations apply:

Constant Air Density, Variation in RPM

1. Cfm varies directly as the speed ratio - - - - - $\frac{CFM_1}{CFM} = \frac{RPM_1}{RPM}$
2. Pressures vary directly as the square of the speed ratio - - - - - $\frac{P_1}{P} = \left(\frac{RPM_1}{RPM}\right)^2$
3. Horsepower varies directly as the cube of the speed ratio - - - - - $\frac{HP_1}{HP} = \left(\frac{RPM_1}{RPM}\right)^3$

Constant RPM, Varying Air Density

4. Cfm remains constant.
5. Pressures vary directly with air density - - - - - $\frac{P_1}{P} = \frac{d_1}{d}$
6. Horsepower varies directly with air density - - - - - $\frac{HP_1}{HP} = \frac{d_1}{d}$

Constant Tip Speed of Wheel, Variation in Fan Size

7. Pressures remain constant.
8. Cfm varies as the square of the wheel diameter - - - - - $\frac{CFM_1}{CFM} = \left(\frac{D_1}{D}\right)^2$
9. Horsepower varies as the square of the wheel diameter - - - - - $\frac{HP_1}{HP} = \left(\frac{D_1}{D}\right)^2$
10. Rpm varies inversely as the wheel diameter - - - - - $\frac{RPM_1}{RPM} = \frac{D}{D_1}$

Constant RPM, Variation in Fan Size

11. Cfm varies as cube of wheel diameter - - - - - $\frac{CFM_1}{CFM} = \left(\frac{D_1}{D}\right)^3$
12. Pressures vary as square of wheel diameter - - - - - $\frac{P_1}{P} = \left(\frac{D_1}{D}\right)^2$
13. Horsepower varies as fifth power of wheel diameter - - - - - $\frac{HP_1}{HP} = \left(\frac{D_1}{D}\right)^5$

Variation in Fan Size and Speed

14. Cfm varies as cube of wheel diameter \times speed ratio - - - - - $\frac{CFM_1}{CFM} = \left(\frac{D_1}{D}\right)^3 \times \frac{RPM_1}{RPM}$
15. Pressures vary as square of wheel diameter \times square of speed ratio - - - - - $\frac{P_1}{P} = \left(\frac{D_1}{D}\right)^2 \times \left(\frac{RPM_1}{RPM}\right)^2$
16. Horsepower varies as wheel diameter⁵ \times speed ratio³ - - - - - $\frac{HP_1}{HP} = \left(\frac{D_1}{D}\right)^5 \times \left(\frac{RPM_1}{RPM}\right)^3$

SAMPLE SPECIFICATIONS

The following specifications are offered for use by architects and engineers in order to establish a standard for bidders:

Type FC Fans

Furnish and install where shown on plans Trane or equal fans of the capacities and sizes listed on plans. Indicated wheel diameters are minimum, and in no case shall tip speeds or outlet velocities be exceeded.

These fans shall be of the forward curved multiblade type designed for the highest volumetric efficiency and conservation of space.

Housings shall be of the volute form constructed of cold rolled steel and braced to eliminate vibration. Inlets and outlets are to be properly drilled and arranged so that duct connections can be readily made.

Housings on all fans of 30" wheel diameter and smaller shall be of lockseam construction and convertible for various directions of discharge.

When wheel diameters are larger than 30", housing assemblies shall be bolted permitting fans to be knocked down and reassembled. Side plates and apron sheets shall extend to base angles, forming box type base. Housings of 66" fan and larger shall be split horizontally.

Wheels shall be of the back plate and hub construction having not less than 64 forward curved die-formed blades with blades, rims and back plates carefully constructed of cold rolled steel. On wheel diameters 8" and smaller, the minimum number of blades shall be 48.

Hubs shall be of cast iron with suitable curvature to direct flow of air to blades. The entire wheel design and assembly must conform to latest standards of aero-dynamic design and be accurately balanced. The right is reserved to reject any wheel not properly balanced.

Use Paragraph 1 or 2.

1. Fans shall be equipped with precision ball bearings of the self-aligning, grease-packed pillow-block type mounted on steel cross arms rigidly braced. Bearings shall be built with a grease seal that will prevent loss of lubricant and exclude dirt from bearing.

2. Fans with shafts $1\frac{1}{8}$ " diameter and larger at bearings shall be equipped with oil ring lubricated precision built, babbitted, self-aligning pillow block sleeve bearings. Bearings sizes through $2\frac{1}{4}$ " shall have one oil ring, larger bearings shall have two oil rings. Graphite insert phosphor bronze, self-aligning pillow block bearings shall be furnished on fans with shafts smaller than $1\frac{1}{8}$ " in diameter.

All shafts shall be of .30 carbon hot rolled steel properly turned and accurately ground to size. Key seats are to be carefully and accurately cut.

Shaft diameters, sizes of base angles, and reinforcing angles, and all gauges of steel shall be of recognized standards, and in no case less than recommendations set forth by the National Association of Fan Manufacturers. All ratings are to be from tests carried out in accordance with the Test Code of the National Association of Fan Manufacturers.

Shop drawings, including statement of working conditions for each fan, shall be submitted for approval before fabrication.

Type BI Fans

Furnish and install where shown on plans Trane or equal fans of the capacities and sizes listed on plans. Indicated wheel diameters are minimum, and in no case shall tip speeds or outlet velocities be exceeded.

These fans shall be of the backward curve blade design with non-overloading power characteristics.

Housings shall be of the volute form constructed of cold rolled steel and rigidly braced to eliminate vibration. Inlets and outlets are to be properly drilled and arranged so that duct connections can be readily made.

Housings on all fans of 30" wheel diameter and smaller shall be of lockseam construction and convertible for various directions of discharge.

When wheel diameters are larger than 30", housing assemblies shall be bolted permitting fans to be knocked down and reassembled. Side plates and apron sheets shall extend to base angles, forming box type base. Housings of 66" fan and larger shall be split horizontally.

Wheels shall be of the back plate and hub construction having not less than 12 backwardly inclined blades, with blades, rims and back plates carefully constructed of cold rolled steel.

Hubs shall be of cast iron with suitable curvature to direct the flow of air to the blades. The entire wheel design and assembly must conform to the latest standards of aero-dynamic design and be accurately balanced. The right is reserved to reject any wheel not properly balanced.

Use Paragraph 1 or 2.

1. Fans shall be equipped with precision ball bearings of the self-aligning, grease-packed pillow-block type mounted on steel cross arms rigidly braced. Bearings shall be built with a grease seal that will prevent loss of lubricant and exclude dirt from bearing.

2. Fans with shafts $1\frac{1}{8}$ " diameter and larger at bearings shall be equipped with oil ring lubricated precision built, babbitted, self-aligning pillow block sleeve bearings. Bearings sizes through $2\frac{1}{4}$ " shall have one oiling ring, larger bearings shall have two oiling rings. Graphite insert phosphor bronze, self-aligning pillow block bearings shall be furnished on fans with shafts smaller than $1\frac{1}{8}$ " in diameter.

All shafts shall be of .30 carbon hot rolled steel properly turned and accurately ground to size. Key seats are to be carefully and accurately cut.

Shaft diameters, sizes of base angles, and reinforcing angles, and all gauges of steel shall be of recognized standards, and in no case less than recommendations set forth by the National Association of Fan Manufacturers. All ratings are to be from tests carried out in accordance with the Test Code of the National Association of Fan Manufacturers.

Shop drawings, including statement of working conditions for each fan, shall be submitted for approval before fabrication.



1. Installed in a separate building this 60" Double Width Fan ventilates a large assembly building.

2. A No. 44 Forward Curved Fan used to handle gases in a process application.

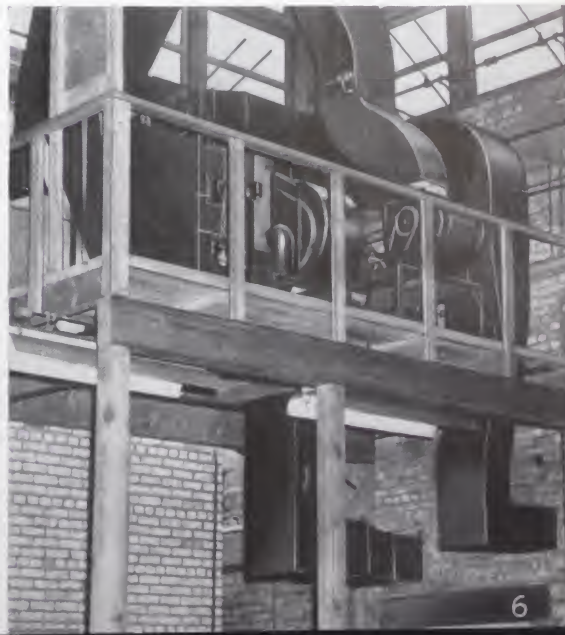
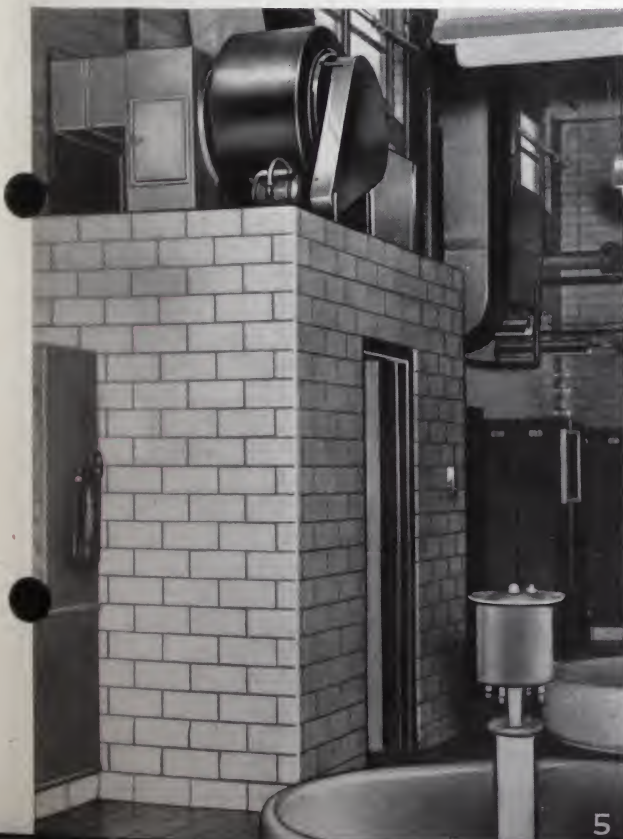
3. A 24" Forward Curved Fan mounted on a steel platform suspended from ceiling. Rubber isolators eliminate vibration transmission.



4. A No. 24 Single Width Fan mounted on a Trane Fan Base. Note good duct construction: canvas connection on inlet and discharge, straight run of duct for at least 1 1/2 diameters from fan discharge, good inlet connection.

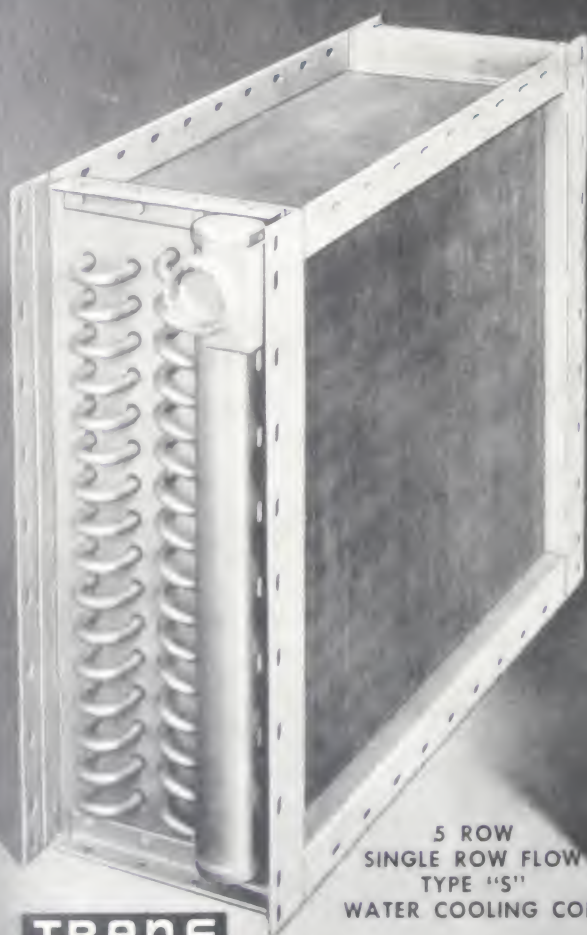
5. Small forward Curved Fan used to exhaust vapour from employees' shower room.

6. Two Trane Fans are used to air-condition office space in this factory. One fan supplies the conditioned air, the other exhausts air.

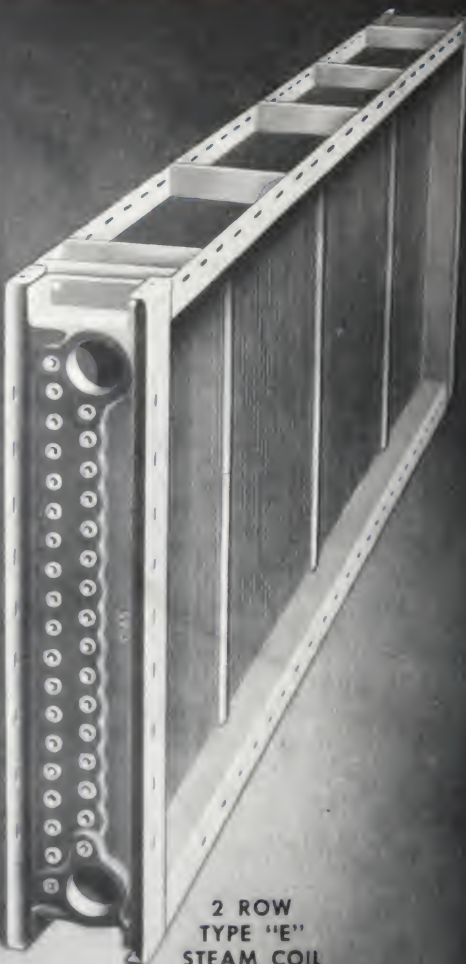


TRANE HEATING *and* COOLING COILS

used in conjunction with Trane Fans for Heating, Cooling, Ventilating and Industrial Process Applications



5 ROW
SINGLE ROW FLOW
TYPE "S"
WATER COOLING COIL



2 ROW
TYPE "E"
STEAM COIL



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